



## NORTH PHILADELPHIA PEACE PARK

2226 W. JEFFERSON STREET

THOMAS JEFFERSON UNIVERSITY:  
RETAIL DIVISION





# NORTH PHILLY PEACE PARK

## NORTH PHILADELPHIA PEACE PARK HISTORY

PICTURE: CULTUREWORKS





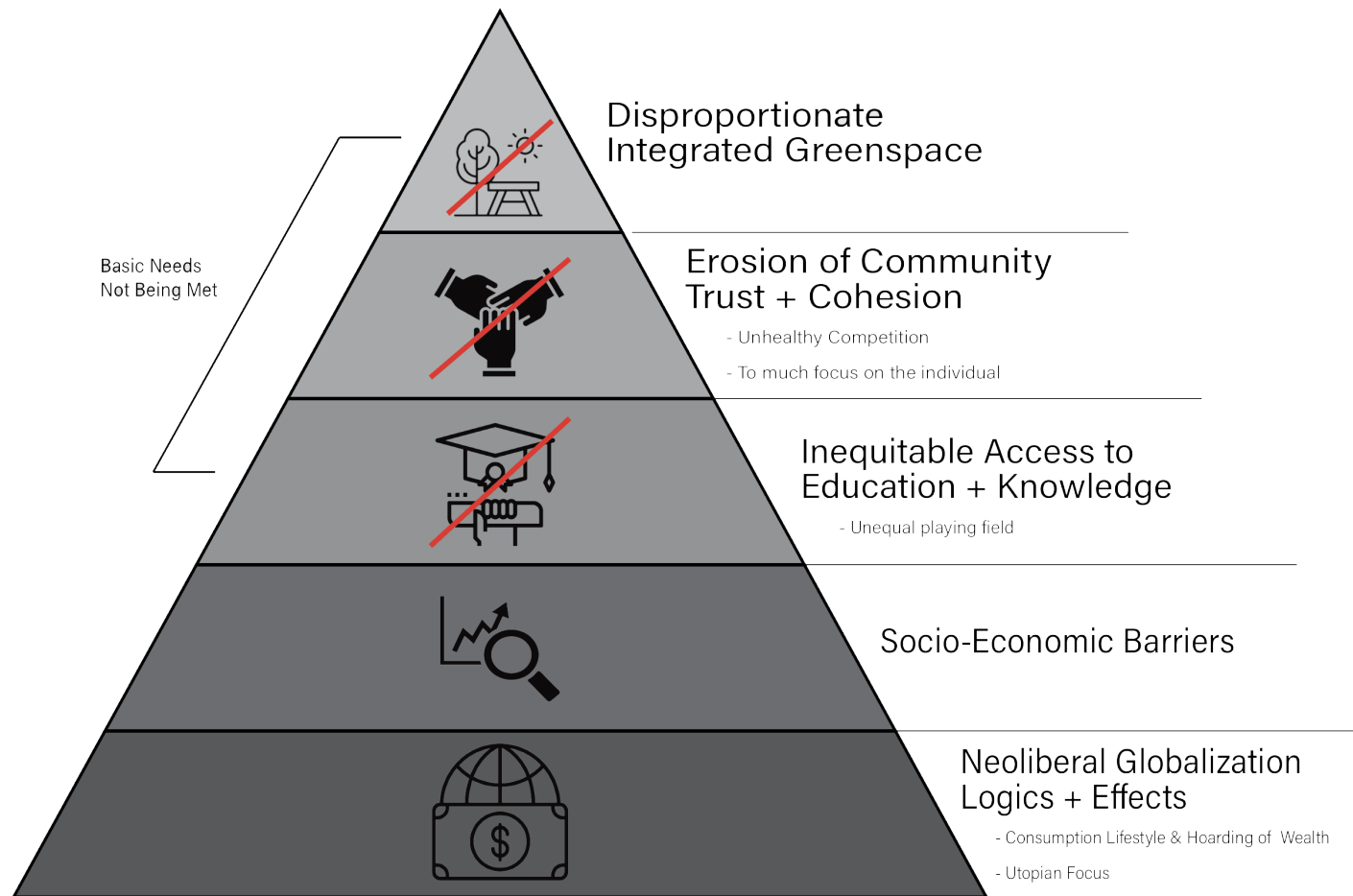
# NORTH PHILLY PEACE PARK

## NORTH PHILADELPHIA PEACE PARK HISTORY

PICTURE: CULTUREWORKS



# DESIGN CONSTRAINTS





# DESIGN CONSTRAINTS

## FOOD DESERT?

"Food deserts develop as grocery stores cluster around high-paying customers. Less than 1 percent of Center City residents are more than a half-mile away from a grocery store, according to city data, but in North Philly neighborhoods like Germantown and Belfield, that number can reach between 40 and 50 percent"

phillymag.com

RODRIGUEZ  
GROCERY

.4 MILES

VMR  
CORPORATION

.4 MILES

POPPY DELI & MINI  
MARKET

.2 MILES

BROTHERS  
CORNER

.3 MILES



SHARSWOOD, PHILADELPHIA

## SHARSWOOD IS...

MOSTLY OWNED BY THE LOCAL HOUSING AUTHORITY;  
PHILADELPHIA HOUSING AUTHORITY.

LOW LOCAL DEVELOPMENT AND AN INFLUX OF  
GENTRIFICATION IN THE AREA.

PEACE PARK AND THE LOCAL SHARSWOOD AREA  
STRIVES TO MAINTAIN AND GROW A COMMUNITY-  
CENTERED SPACE THAT CAN PROVIDE A HOME FOR  
ITS CULTURAL, HORTICULTURAL AND EDUCATIONAL  
EVENTS.

## THIS PROJECT WILL SERVE THE LOCAL COMMUNITY THROUGH...

REPURPOSING CURRENT BUILDINGS ON SITE AND  
PROVIDING PRODUCE TO THE LOCAL SHARSWOOD  
COMMUNITY WHICH IS IN A FOOD DESERT.

THE PEACE PARK WILL BE ABLE TO GREATLY IMPACT  
ITS LOCAL COMMUNITY AND PROVIDE A SPACE FOR  
COMMUNITY EVENTS, GARDENS AND MARKETSPACE.

THIS WILL BRING ECONOMIC INFLUX TO THE LOCAL  
COMMUNITY AND PROVIDE RESIDENTS WITH A SPACE  
TO ENJOY.



# DESIGN GOALS

## OUR GOAL IS...

TO CREATE A SPACE FOR ITS COMMUNITY MEMBERS THROUGH VERTICALLY INTEGRATED RETAIL FARMING.

OPEN-AIR MARKET, RETAIL SPACE, GARDENS, AND GREENHOUSES TO INCREASE FOOD PRODUCTION, AS WELL AS A KITCHEN AND RECREATIONAL AND EDUCATIONAL SPACES.

ALLOW THE PROJECT TO HOLD MULTIPLE USES FOR THIS INTEGRATED COMMUNITY SUPPLY-CHAIN RETAIL MODEL.

DEVELOP A SUPPLY-CHAIN ON SITE FROM SEED, TO GROWING, TO PROCESSING, TO SELLING AND THEN TO EATING WITH EDUCATIONAL GUIDANCE ON ALL OF THOSE STEPS.

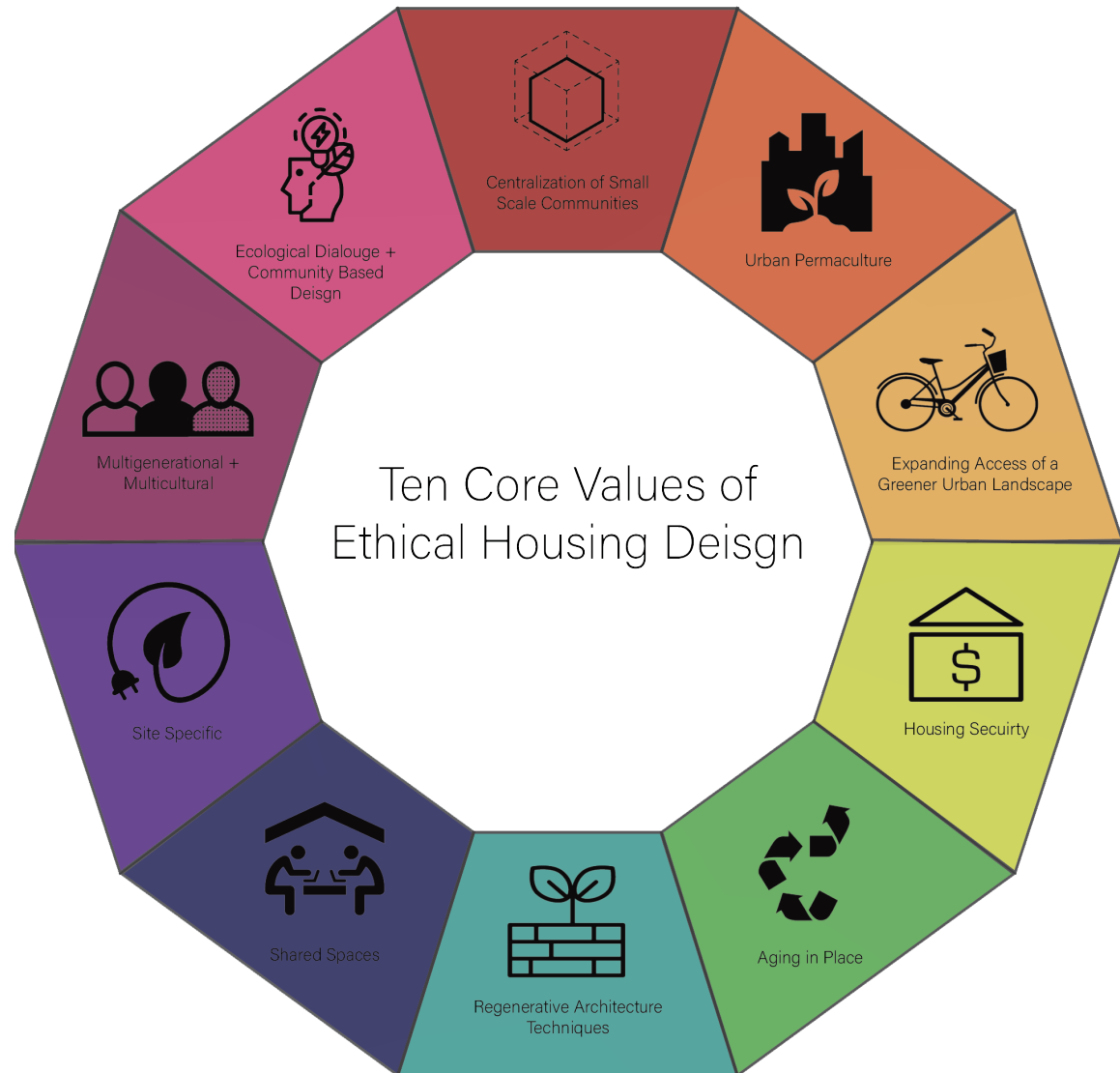
## REDUCE COSTS AND ENVIRONMENTAL IMPACT...

KEEP ALL EXISTING BUILDINGS ON SITE AND REPURPOSE THEM.

LOCAL MATERIALS AND INCLUDING MURALS FROM THE PHILADELPHIA MURAL ARTS PROGRAM.

SERVE THE LOCAL COMMUNITY.

WILL HELP CREATE AN NEW ECOLOGICAL DIALOGUE THROUGH COMMUNITY BASED DESIGN OF URBAN AGRICULTURAL RETAIL.





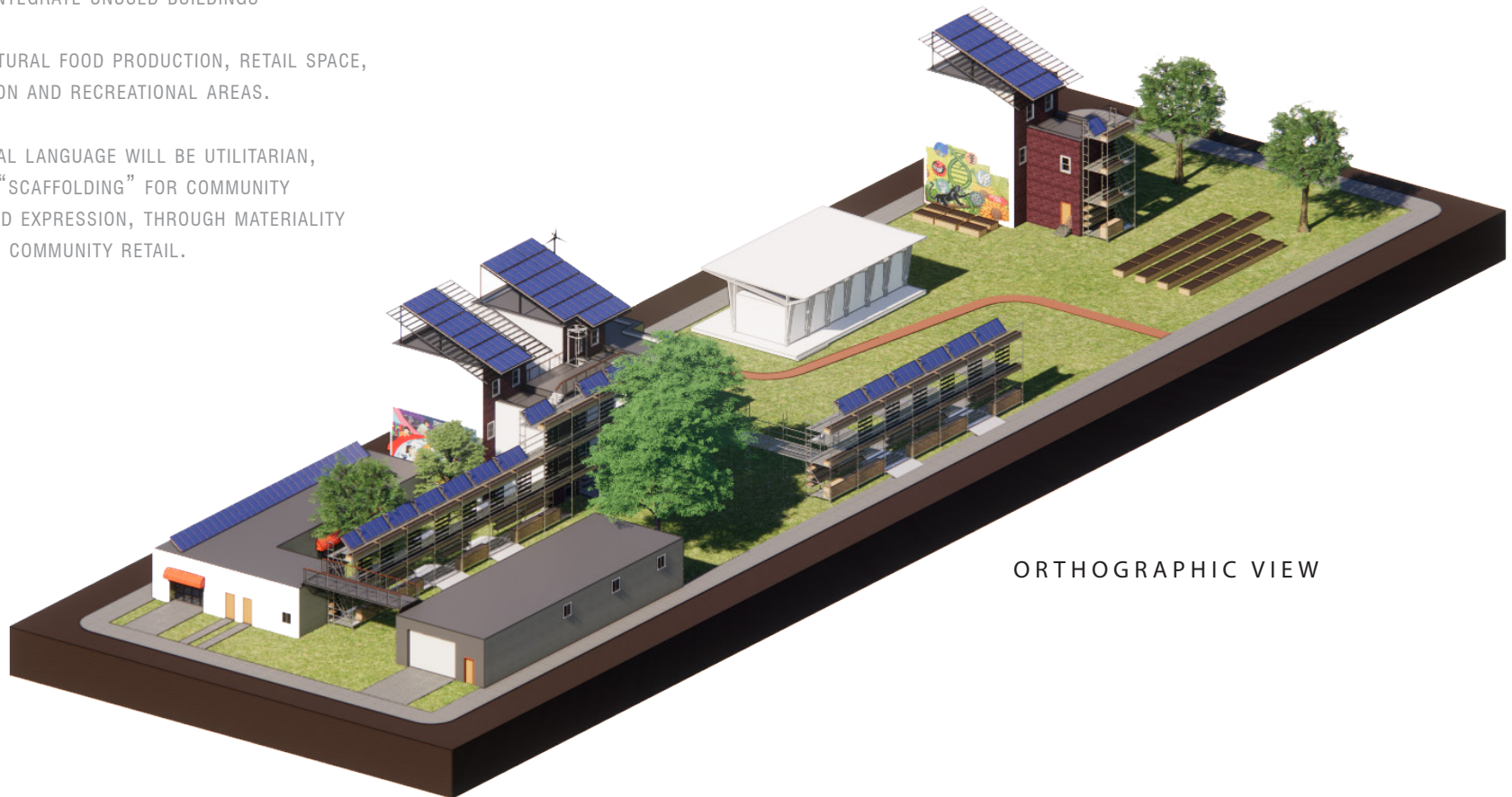
# ARCHITECTURE

## WE WILL...

TRANSFORM AND INTEGRATE UNUSED BUILDINGS

MAXIMIZE AGRICULTURAL FOOD PRODUCTION, RETAIL SPACE,  
ENERGY PRODUCTION AND RECREATIONAL AREAS.

THE ARCHITECTURAL LANGUAGE WILL BE UTILITARIAN,  
BUT PROVIDE THE “SCAFFOLDING” FOR COMMUNITY  
CUSTOMIZATION AND EXPRESSION, THROUGH MATERIALITY  
AND USE OF LOCAL COMMUNITY RETAIL.



ORTHOGRAPHIC VIEW

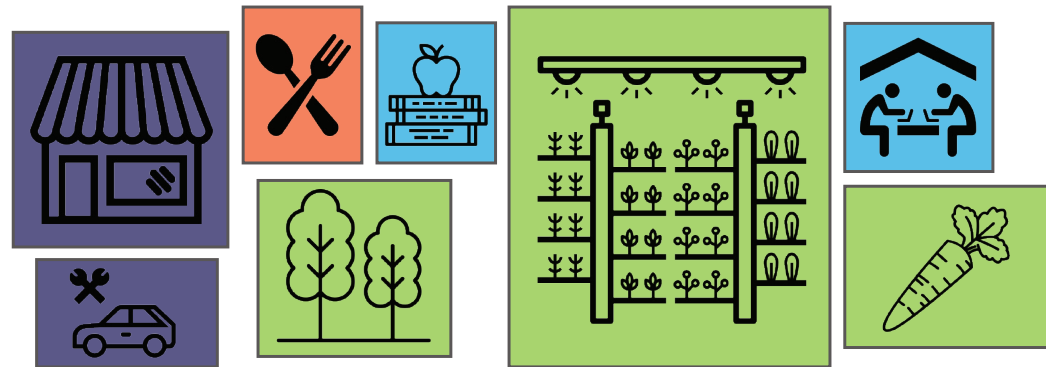


# OCCUPANT EXPERIENCE

## NORTH PHILADELPHIA PEACE PARK

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THOMAS JEFFERSON UNIVERSITY : RETAIL DIVISION



### North Philly Peace Park Site Program



**Retail** - Market for Site Produce  
M - Mercantile  
60 gross sf. required per person  
50 occupants total  
3,000 sf. required



**Community Kitchen** - Cooking + Food Prep  
F-1: Commercial Kitchen  
200 gross sf. required per person  
5 occupants total  
1,000 sf. total space required



**Educational** - Co-Working Library  
E - Educational  
20 net sf. required per person  
40 Occupants total  
800 sf. total space required



**Educational** - Arts + Incubation Businesses  
E - Educational  
20 net sf. required per person  
40 Occupants total  
800 sf. total space required



**Auto Mechanic** - Existing to Remain



**Food Production** - Orchard + Green Space



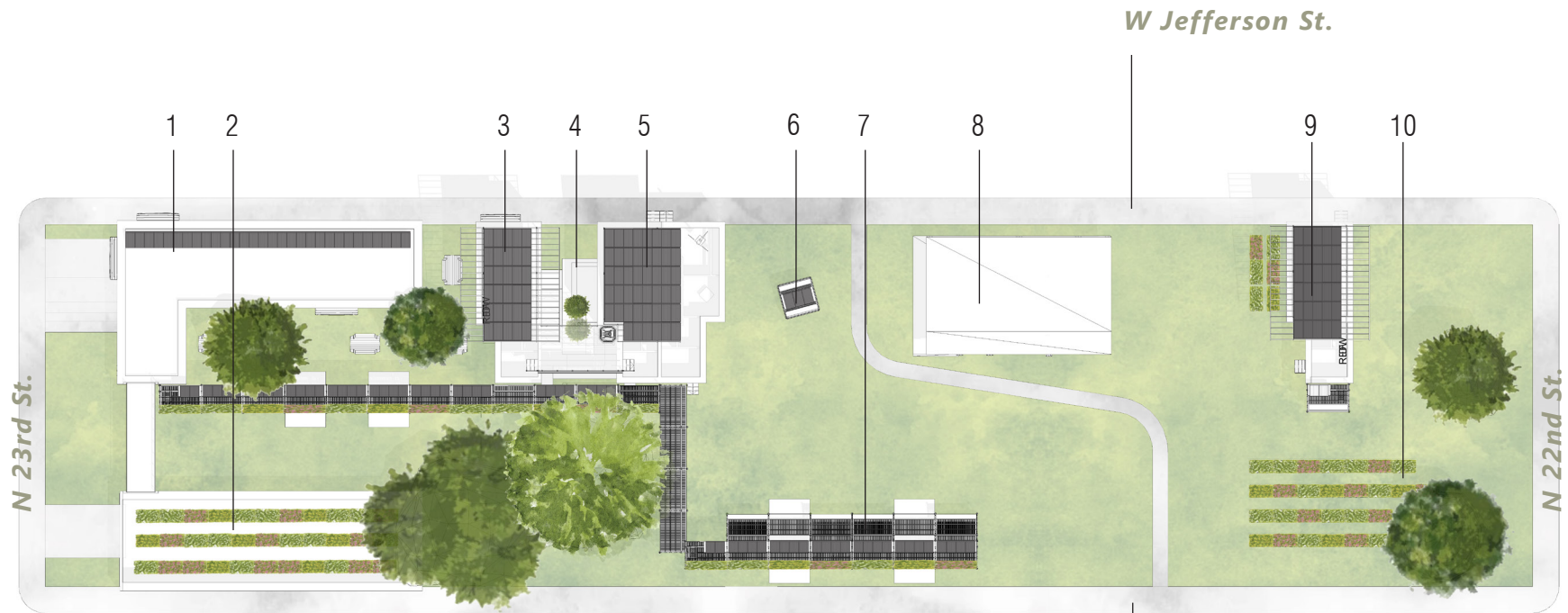
**Food Production**  
Vertical Scaffold Farming



**Food Production**  
Raised Beds

THE SITE IS PROGRAMMED TO INCLUDE SEVERAL ACTIVITY TYPES SUCH AS OUTDOOR AGRICULTURE, ARTS AND DESIGN CLASSES, A LIBRARY FILLED WITH HISTORY AND SUSTAINABILITY BOOKS, A COMMUNITY RUN KITCHEN, AND AN INDOOR FLEXIBLE MARKET. THE INTERIOR DESIGN IS A MIX OF AFRO-FUTURISM AESTHETICS AS A WELL AS MODERN UTILITY. THE APPLIANCES IN THE BUILDINGS CONSIST OF REFRIGERATORS, TOILETS, SINKS, BATHTUBS, AND A FULL COMMERCIAL KITCHEN SETUP. ALLOWING ALL OF THE INTERIOR SPACES TO BE FLEXIBLE -BESIDES THE KITCHEN- THE COMMUNITY IS AT LIBERTY TO USE THE BUILDINGS TO SUIT THEIR CURRENT NEEDS WHILE BEING ABLE TO ADAPT FOR THE FUTURE

# SITE PLAN



## SITE PLAN

- 1-RETAIL BUILDING
- 2-EXISTING MECHANIC SHOP
- 3-COMMUNITY KITCHEN BUILDING
- 4-OUTDOOR PATIO "BUFFER ZONE"
- 5-EDUCATIONAL BUILDING
- 6-CUBE VERTICAL GARDEN
- 7-SCAFFOLDING VERTICAL GARDEN
- 8-PAVILION
- 9-ARTS BUILDING
- 10-RAISED BED GARDEN

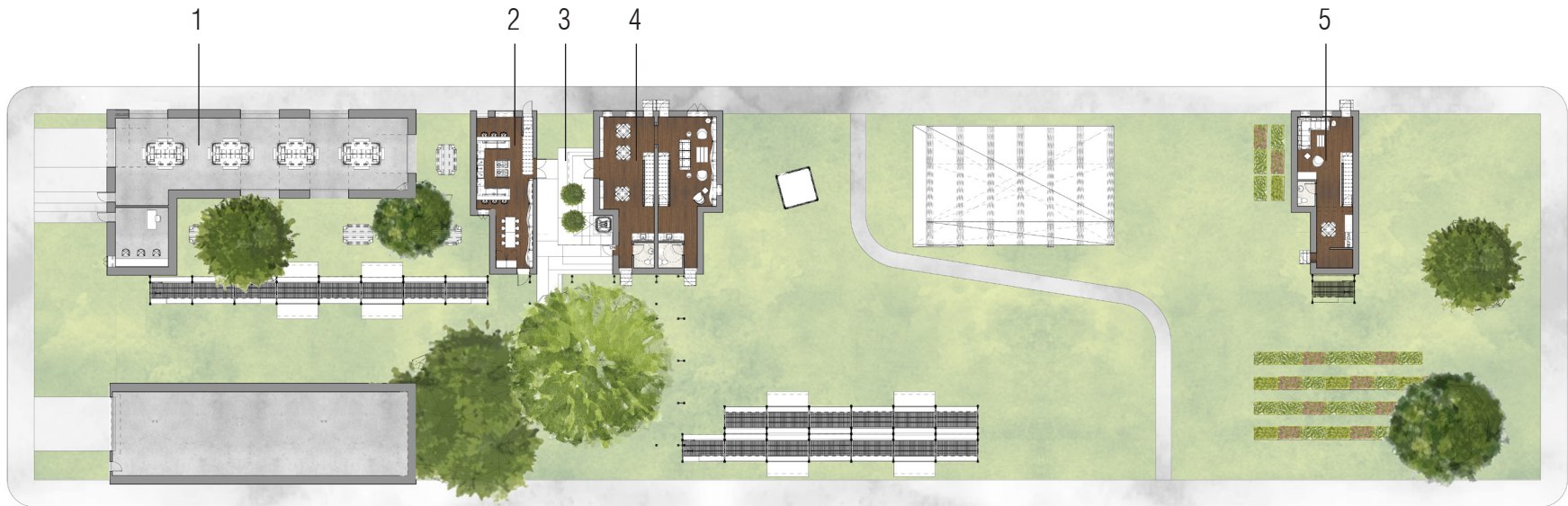


# FIRST FLOOR PLAN

## NORTH PHILADELPHIA PEACE PARK

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## FIRST FLOOR PLAN

- 1-INDOOR PRODUCE MARKET
- 2-PERMACULTURE COMMUNITY KITCHEN
- 3-OUTDOOR PATIO "BUFFER ZONE"
- 4-CO-WORKING LIBRARY
- 5-MULTIUSE ARTS AND EDUCATION

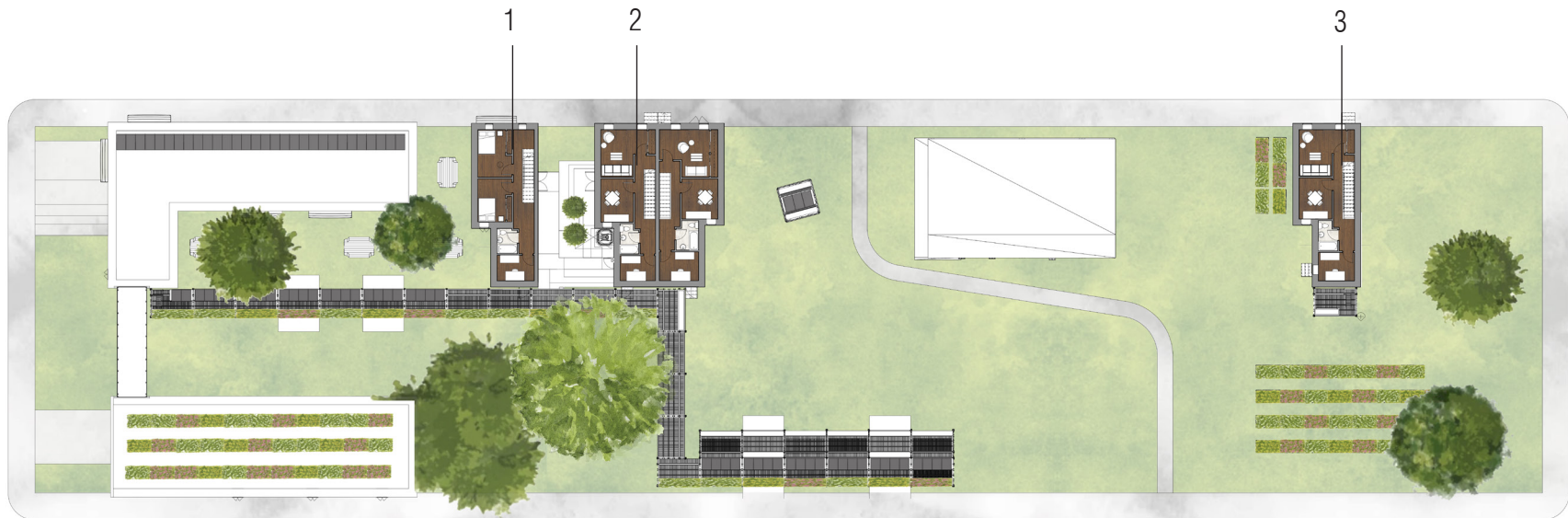


# SECOND FLOOR PLAN

## NORTH PHILADELPHIA PEACE PARK

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## SECOND FLOOR PLAN

- 1-EXISTING TENANT
- 2-BUSINESS INCUBATION SPACE
- 3-MULTIUSE THERAPY SUITE







# COMFORT + ENVIRONMENTAL QUALITY

## INTERIOR RENDERINGS



OUR PROPOSAL WILL GIVE THE COMMUNITY A SAFE SPACE TO INTERACT WITH EACH OTHER, RESULTING IN A STRONGER COMMUNITY ALLIANCE. COMMUNITY MEMBERS WILL DEVELOP A STRONGER CONNECTION TO THE NATURAL ENVIRONMENT, BY IMPLEMENTING AND MAXIMIZING THE CULTIVATION AND GROWTH OF VEGETATION WITHIN OUR BUILDINGS. INCORPORATING THE USE OF NATURAL MATERIALS SUCH AS WOOD AND HARVESTING FOOD INDOORS WILL BRING AN OVERALL “ORGANIC” FEEL TO THE USER. IMPLEMENTING OPERABLE STRUCTURES THAT OPEN TO THE OUTDOORS WHEN WEATHER PERMITS WILL ALLOW OUR BUILDING TO DIRECTLY RESPOND TO THE EXPERIENTIAL ENVIRONMENTAL QUALITIES THE SITE HAS TO OFFER. WE WILL BRING MAN AND NATURE CLOSER TOGETHER BY MAXIMIZING NATURAL LIGHT AND NATURAL VENTILATION WHENEVER POSSIBLE.



# COMFORT + ENVIRONMENTAL QUALITY

## INTERIOR RENDERINGS



# COMFORT + ENVIRONMENTAL QUALITY

INTERIOR RENDERING



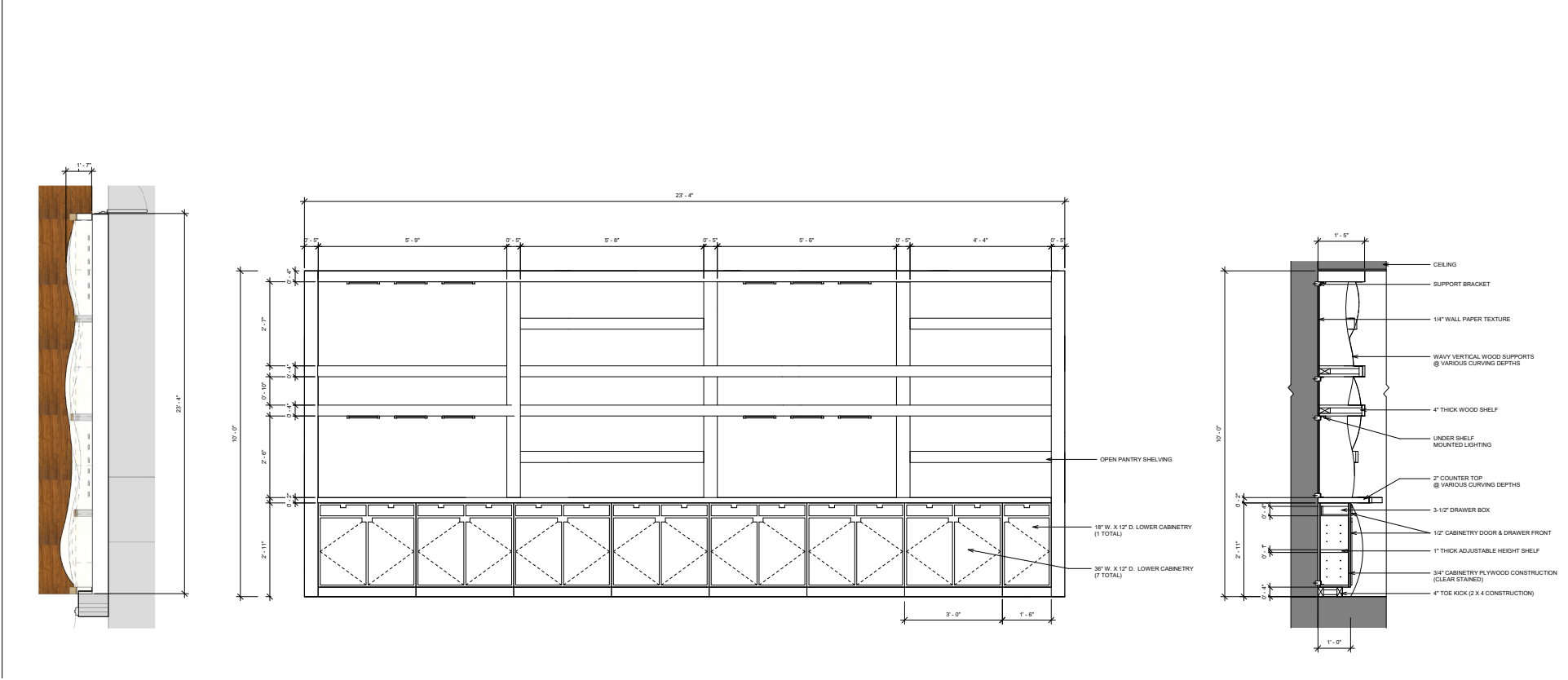
INDOOR MARKET

*NORTH PHILLY PEACE PARK – THOMAS JEFFERSON UNIVERSITY*



# INTERIOR DETAILS

**NORTH PHILADELPHIA PEACE PARK**  
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KITCHEN MILLWORK DETAIL

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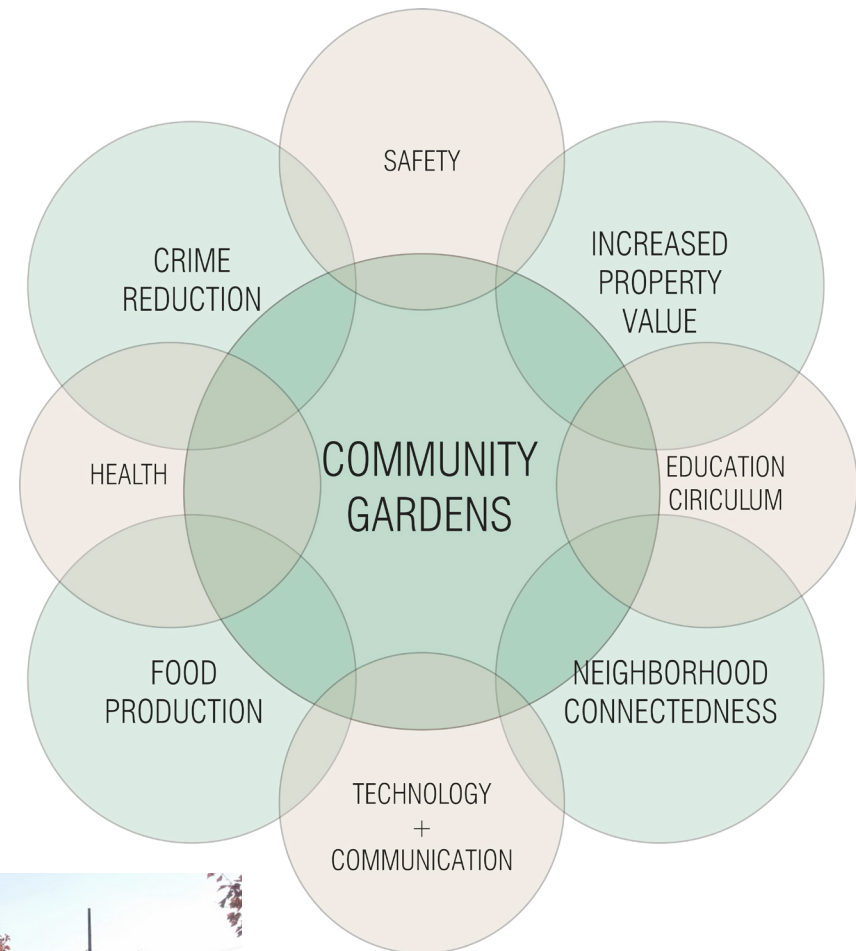
# ENVIRONMENTAL IMPACT

## WE WILL...

STRIVE TO LOWER OUR EMBODIED ENVIRONMENTAL IMPACT BY RESTORING AND REPURPOSING EXISTING BUILDINGS AND/OR MATERIALS ON SITE.

GIVING PREFERENCE TO LOCAL MATERIALS AND LOCAL LABOR.

OUR ULTIMATE ENVIRONMENTAL GOAL IS TO MAXIMIZE RAINWATER COLLECTION, SOLAR ENERGY AND POTENTIALLY WIND ENERGY PRODUCTION.

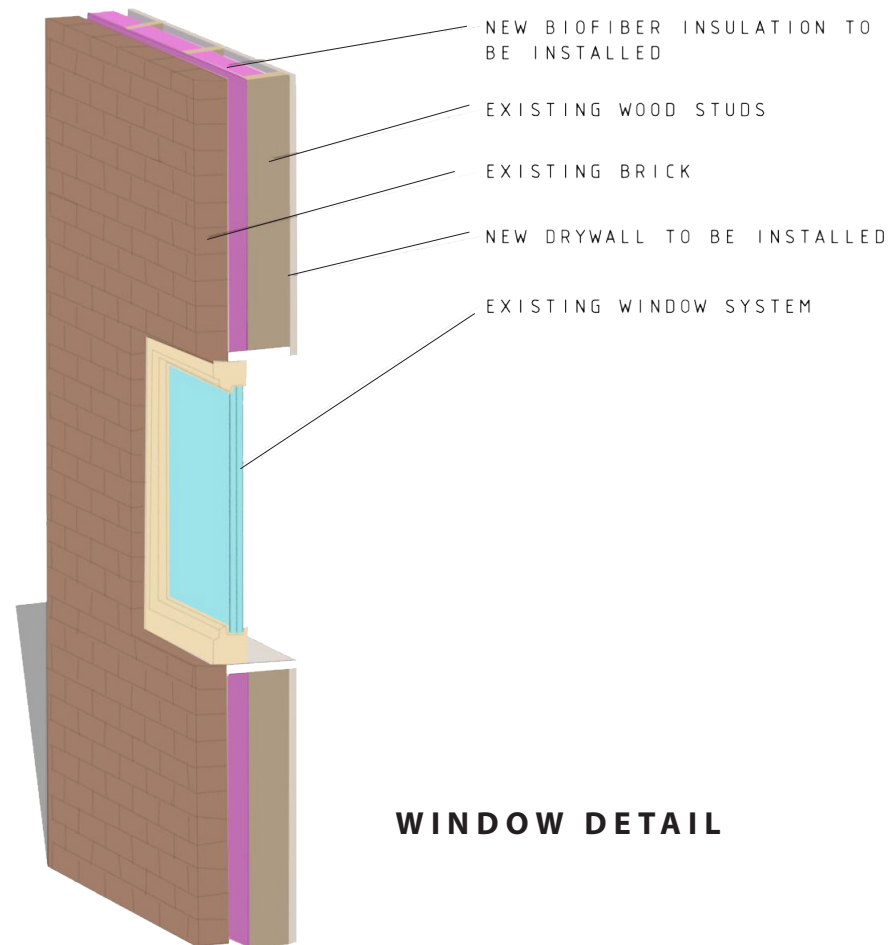


## EXISTING CONDITIONS

# DURABILITY + RESILIENCE

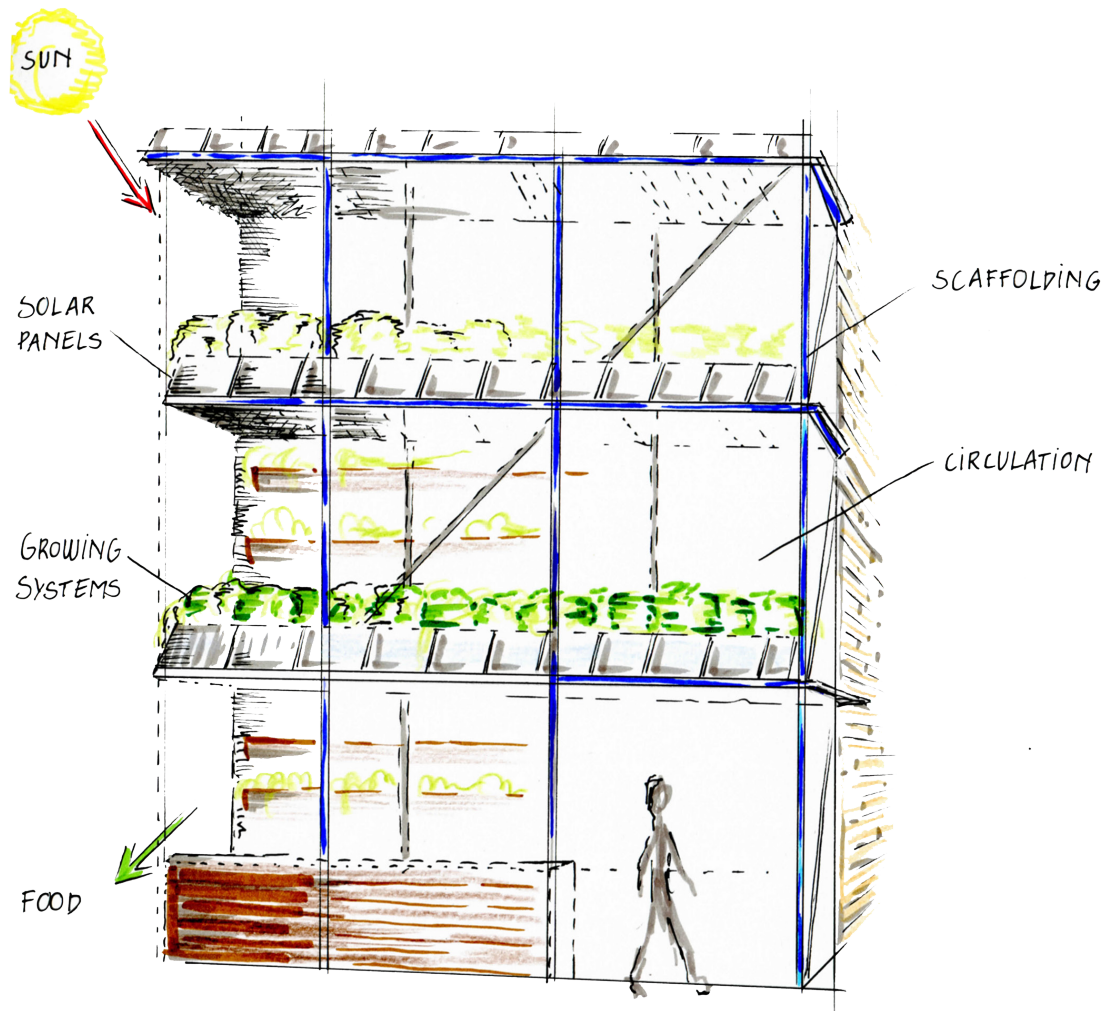
THE EXISTING BUILDINGS ARE MADE PRIMARILY OF BRICK AND CMU. THESE BUILDING MATERIALS WILL LAST A LOT LONGER THAN WHAT A TRADITIONAL DEVELOPER IN THIS AREA WOULD USE (STICK FRAME), AS LONG AS ROOF AND WALL INTEGRITY CAN BE MAINTAINED. THE STRUCTURAL LATTICE-WORK WE ARE PROVIDING VIA THE SCAFFOLDING WILL CREATE AN ADDITIONAL PROTECTIVE LAYER AROUND THESE SURFACES, EXTENDING THEIR LIFESPAN AND MAKING MAINTENANCE MUCH EASIER AND LESS EXPENSIVE.

JUST BioFiber WILL BE USED IN PLACE OF EXISTING INSULATION. BioFiber IS RATED AT R 40. WITH ITS EASE OF CONSTRUCTION CAPABILITY, IT CAN EASILY REPLACE THE EXISTING INSULATION AND FIT IN BETWEEN THE EXISTING WOODEN STUDS. BioFiber CLEANS THE CONDITIONS OF CO<sub>2</sub>. IN ADDITION, BioFiber ALSO ACTS AS A MOISTURE BARRIER COMBATING THE HARSH HUMIDITY CLIMATE THAT OCCURS.





# ENGINEERING



CONCEPTUAL DIAGRAM

## WE WILL BE...

IMPLEMENTING A SCAFFOLDING STRUCTURE THAT WILL BE ENGINEERED AND MODIFIED TO BE A PERMANENT STRUCTURE.

HIGHLY COST-EFFECTIVE

SERVE AS THE SUBSTRATE FOR ADDITIONAL FOOD PRODUCTION, WATER COLLECTION, AND ENERGY GENERATION

THE BUILDING ENVELOPE OF THE RETAIL AND GARAGE BUILDINGS CONSISTS OF CMU STRUCTURE WITH BIOFIBER INSULATION. THE REMAINING BUILDINGS CONSIST OF A BRICK STRUCTURE AND BIOFIBER INSULATION. WE ARE CAPTURING ROOF RUNOFF TO BE HOUSED WITHIN OUR CISTERNS LOCATED ON THE ROOF OF THE BUILDINGS. THE WATER COLLECTED IN THE CISTERNS WILL BE USED FOR IRRIGATION. PLACING THE CISTERNS ON THE ROOF WILL ALLOW US TO USE GRAVITY TO DISTRIBUTE THE WATER FROM THE CISTERN TO THE SYSTEM IN THE BUILDINGS. THE STORMWATER RUNOFF IS MANAGED IN THE BASIN.

THE TOTAL SITE AREA CONSISTS OF 38,000 S.F. THE TOTAL INFILTRATION GOAL IS 25,414 S.F. AND THE TOTAL ROOF CAPTURE IS 13,036 S.F. THE BIOFIBER INSULATION AND THE STRUCTURE OF THE BUILDINGS ENHANCE THE ACOUSTICAL DESIGN OF THE PROJECT. THEY MUFFLE THE SOUNDS THAT MIGHT OCCUR OUTSIDE. WE ARE USING COVERT LED-x 500 WATT FULL-SPECTRUM LED GROW LIGHT FOR THE GREEN WALLSTREET SCAFFOLDING SYSTEM. THE INTERIOR LIGHTING FIXTURES ARE LED LIGHT.

# MARKET ANALYSIS

## NORTH PHILADELPHIA PEACE PARK

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THOMAS JEFFERSON UNIVERSITY : RETAIL DIVISION

WE PLAN TO PRESERVE THE EXISTING MARKET (CMX-2), MECHANIC SHOP (CMX-2), PIZZA SHOP (RM-1), AND THE THREE ROW HOMES (RM-1). THIS IS IMPORTANT TO US BECAUSE SHARSWOOD IS CURRENTLY BEING GENTRIFIED, AS THAT DEVELOPMENT CREEPS IN FROM NEARBY AREAS INCLUDING THE TEMPLE TOWN AND BREWERYTOWN. TYPICAL DEVELOPERS SELDOM PLAN TO REVITALIZE THE EXISTING STRUCTURES BUT INSTEAD DEMOLISH AND BEGIN WITH A BLANK CANVAS. THE TYPICAL HOME VALUE OF HOMES IN SHARSWOOD IS \$225,612. SHARSWOOD HOME VALUES HAVE GONE UP 11.7% OVER THE PAST YEAR AND THEY ARE PREDICTED TO RISE AN ADDITIONAL 9.2% IN THE NEXT YEAR.

PHASE 1 OF THE NPPP'S BUSINESS MODEL CONSISTS OF CALCULATING THE TOTAL OPERATING EXPENSES NEEDED TO FUND THE ADDITION OF THE GREEN WALLSTREET SCAFFOLDING SYSTEM. THE TOTAL START UP COST IS \$2,758. THE START UP COSTS CONSISTS OF THE SCAFFOLDING, SEED, GROWTH MEDIUM, AND HARVESTING EQUIPMENT. THE TOTAL INITIAL INVESTMENT IS \$2,758 AND THE OPERATING INCOME IS \$.

PHASE 2 OF THE NPPP'S BUSINESS MODEL CONSISTS OF ENCLOSING THE SCAFFOLDING WITH POLYETHYLENE SHEETS AND INSTALLING TWO COVERT LED-x 500 WATT FULL-SPECTRUM LED GROW LIGHT. PHASE 2 WOULD COST APPROXIMATELY \$. ALL ENERGY REQUIRED BY THE LED GROW LIGHTS WILL BE POWERED BY THE ENERGY HARVESTED BY THE SOLAR PANELS.



| START UP COSTS                                     | QUANTITY | PRICE          |
|--|----------|----------------|
| Scaffolding  |          | \$1,000        |
| Seed   |          | \$3            |
| Growing Equipment                                  |          | \$335          |
| Harvesting Equipment                               |          | \$20           |
| Polyethelyne                                       |          | \$300          |
| Covert LED-x 500 watt full-Spectrum LED Grow Light | 2        | \$1,100        |
| <b>Total Initial Investment</b>                    |          | <b>\$2,758</b> |
| <b>Total Planting Area</b>                         |          | <b>78 S.F.</b> |
| Plants per season                                  | 117      |                |
| Seasons  | 2/yr     |                |
| Plants per year                                    | 234/yr   |                |
| Total Vegetable Yield                              | 351 lbs  |                |
| Average market of Vegetable                        |          | \$1/ lb        |
| <b>Total return on vegetables/ year</b>            |          | <b>\$702</b>   |



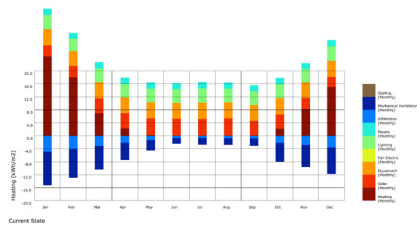
# ENERGY PERFORMANCE

## NORTH PHILADELPHIA PEACE PARK

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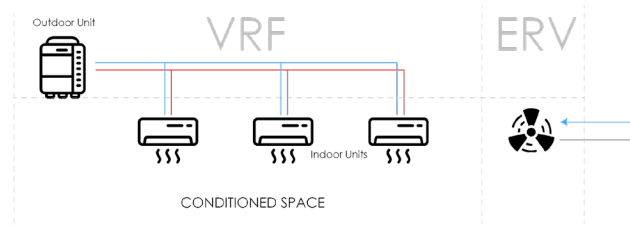
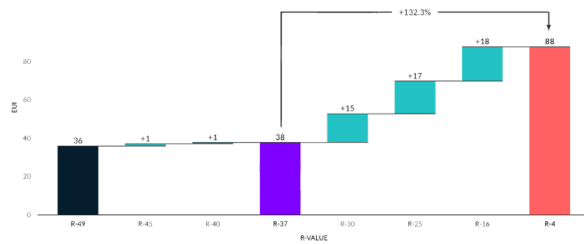
THOMAS JEFFERSON UNIVERSITY : RETAIL DIVISION

PHOTOVOLTAICS AND WIND TURBINES WILL BE THE MAIN SOURCE OF ENERGY TO THE ENTIRE BLOCK AND SELL THE EXCESS BACK TO THE GRID. THE COLLECTION AND STORAGE OF RAINWATER ON SITE WILL PROVIDE FOR IRRIGATION SYSTEMS AND THE NEEDS OF THE BLOCK, ALONG WITH ON-SITE AGRICULTURAL GROWING, THE INTENTION IS FOR THE SITE TO BECOME SELF-SUFFICIENT.



## EXISTING CONDITION

ECM Chart  
R-Value



## HVAC Strategy:

VRF with ERV centralized system for all of the west side buildings on site + Passive Ventilation with heat recovery from the kitchen exhaust and greywater . Also working on a combined system that will move warmth and cool air from building to building, reducing the EUI. For the building that sits on the eastside of the block, we will create a VRF mini split system.

WALL ASSEMBLIES: North, South, East, and West Facades: R-37

FOUNDATION INSULATION: R-28

ROOF INSULATION: R-52 w/ staggered insulation + drainage board

WINDOW PERFORMANCE: U 0.9 - 1, Triple glazed, fixed & operable

ENERGY STAR BASELINE (EUI)

RETAIL STORE = 103.5

FOOD SALES AND SERVICE (restaurant)= 325.6

EDUCATION = 52.4

OFFICE = 52.9

TARGET EUI BEFORE RENEWABLES: 20 BTU (all zones combined)

RETAIL STORE (Mechanic shop) = below 20

FOOD SALES AND SERVICE (restaurant) = below 100

EDUCATION = below 20

OFFICE = below 20

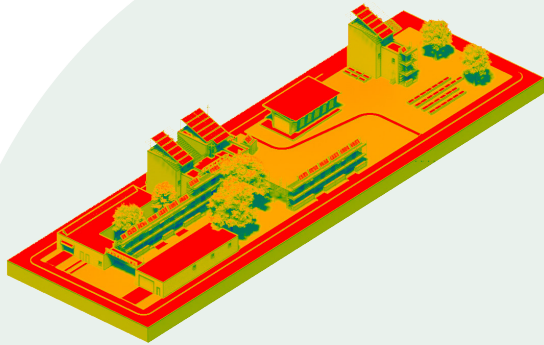
# ENERGY PERFORMANCE

## NORTH PHILADELPHIA PEACE PARK

2226 W. JEFFERSON STREET

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4100 100 69000

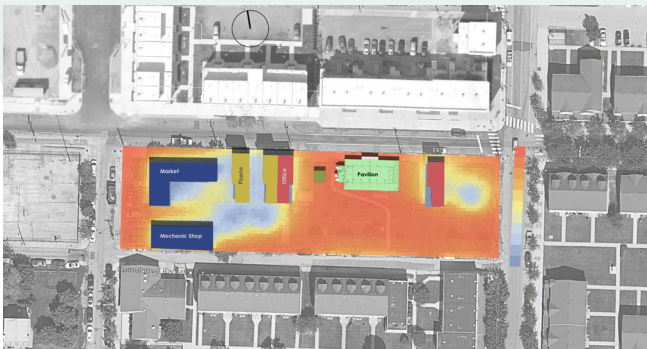


UTILIZING ROOF-TOPS TO OPTIMIZE SOLAR RADIATION AND MAXIMIZE BOTH GROWING AREA AND ENERGY PRODUCTION. USED SOLAR PANELS BROUGHT TO SITE AND ANY ADDITIONAL PV NEEDED WILL BE THE MAIN SOURCE OF ENERGY PRODUCTION TO THE ENTIRE BLOCK, WITH THE INTENTION OF SELLING ANY EXCESS BACK TO THE GRID.

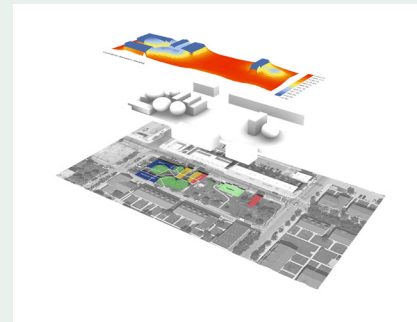
THE COLLECTION AND STORAGE OF RAINWATER ON SITE WILL PROVIDE FOR IRRIGATION SYSTEMS AND THE NEEDS OF THE BLOCK, ALONG WITH ON-SITE AGRICULTURAL GROWING, THE INTENTION IS FOR THE SITE TO BECOME SELF-SUFFICIENT.

THE USE OF ENERGY EFFICIENT MECHANICAL SYSTEMS AND HEAT RECOVERY; TO ACCOMPLISH THIS WE ARE USING VRF AND ERV SYSTEMS IS USED ON WEST-FACING BUILDINGS, AND MINI SPLIT SYSTEM ON THE EAST-FACING BUILDINGS.

## RADIATION ANALYSIS



## RADIATION ANALYSIS



THE ECM CHART IS AN ANALYSIS WE CONDUCTED TO FIND THE APPROPRIATE R-VALUE FOR THE WALLS.



# ENERGY PERFORMANCE

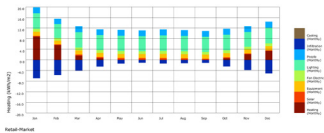
## NORTH PHILADELPHIA PEACE PARK

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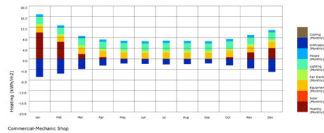
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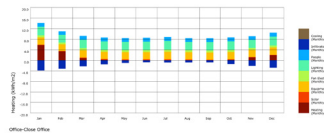
### RESIDENTIAL



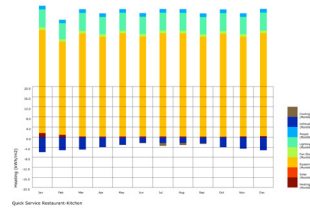
### RETAIL MARKET



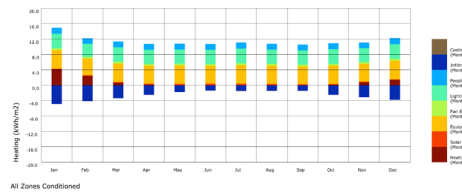
### MECHANIC SHOP



### OFFICE



### QUICK SERVICE RESTAURANT



### ALL ZONES CONDITIONED

THE SITE EUI HAS BEEN REDUCED TO 37 EUI BEFORE PHOTOVOLTAICS. THE HIGH ENERGY CONSUMPTION OF THE COMMERCIAL KITCHEN IS ALSO BEING UTILIZED FOR TRANSFERRING HEAT TO OTHER BUILDINGS.

SITE EUI = 21 KBTU/ ft2/ year

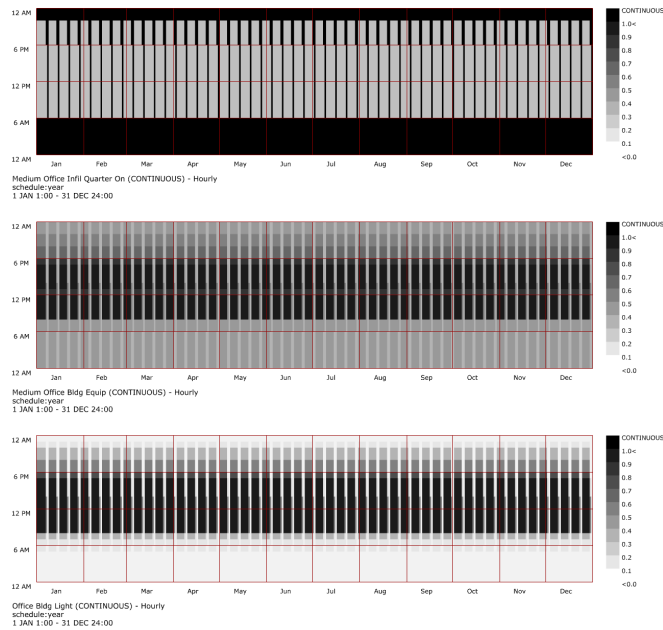
SOURCE EUI = 37 KBTU/ ft2/ year

# ENERGY PERFORMANCE

## NORTH PHILADELPHIA PEACE PARK

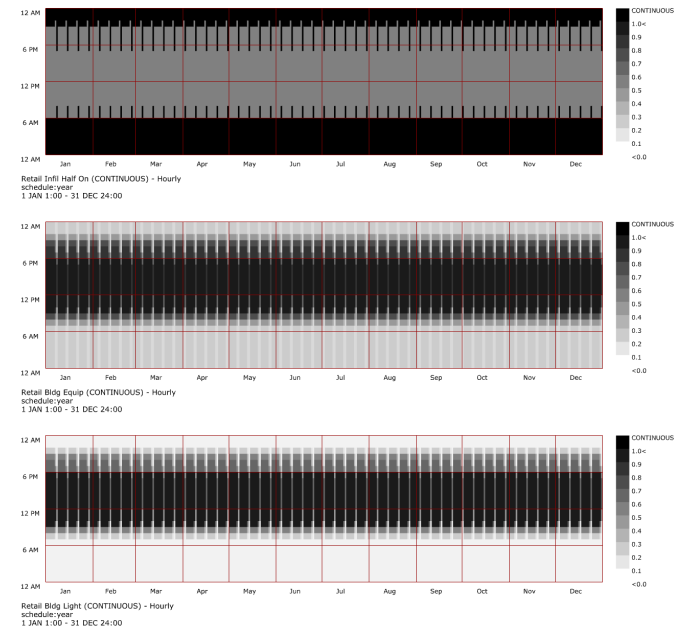
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## OFFICE SCHEDULE

THESE SCHEDULES ARE BASED ON PROGRAMMATIC FUNCTIONS OF THE SPACES. THEY VISUALIZE THE LOADS AND SYSTEMS OVER A 24 HOUR SPAN.

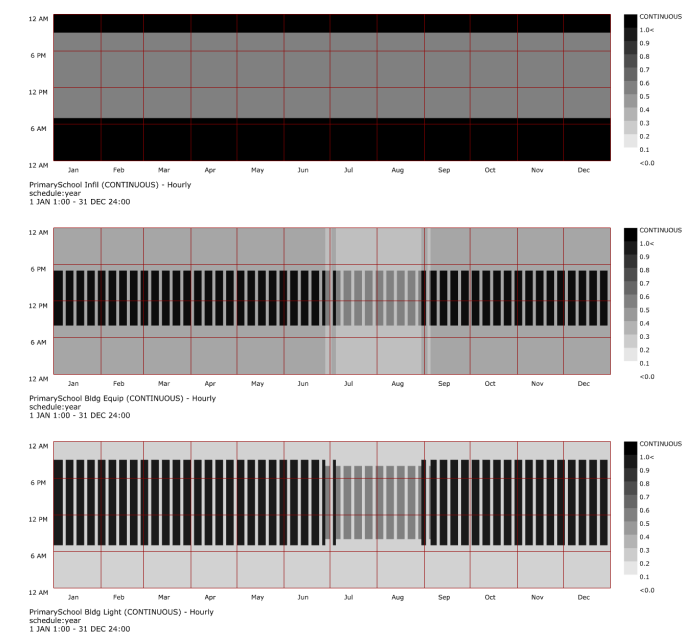


## RETAIL SCHEDULE



# ENERGY PERFORMANCE

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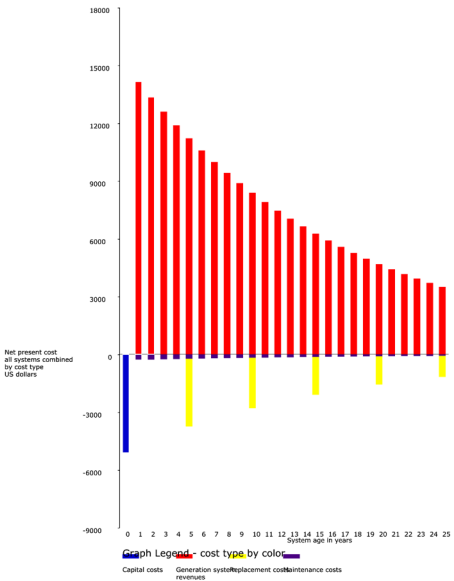


## EDUCATIONAL SCHEDULE

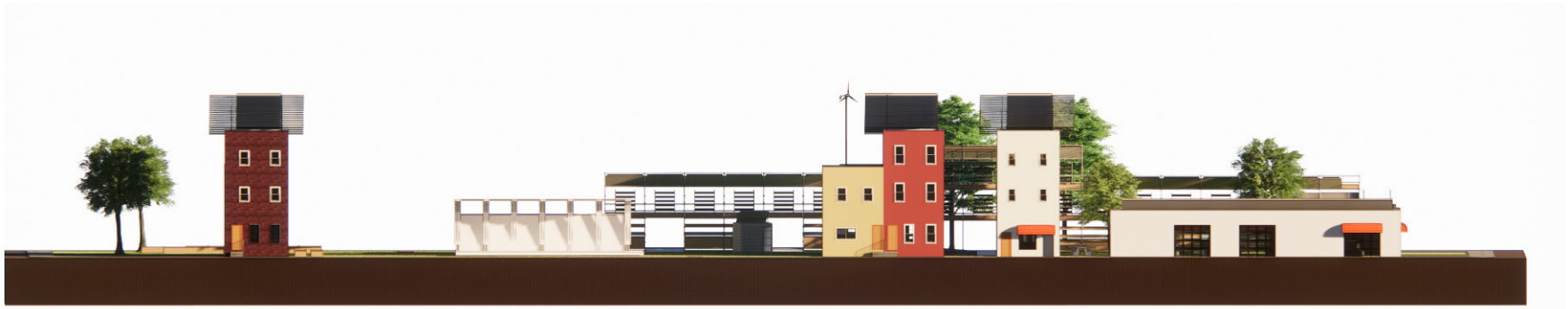
## PV COST

WE HAVE 144 SOLAR PANELS ON SITE WITH A POSSIBILITY OF EXPANSION. THE SOLAR PANELS NOT ONLY COVER ALL THE SITE'S NEEDS, BUT ALSO ABLE TO GENERATE 130 KBTU PER SQ FT.

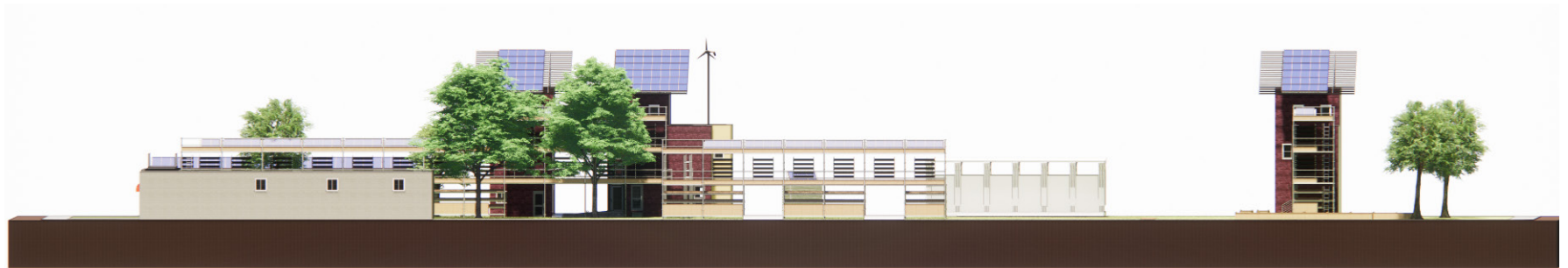
WITH THAT ENERGY, NOT ONLY DO WE NEED THE SITE'S NEED BUT WE CAN SELL THE EXCESS ENERGY PRODUCED BACK TO THE GRID, AS WELL AS PROVIDING FOR THE SCAFFOLDING SYSTEM ENERGY DEMANDS.



# ELEVATIONS

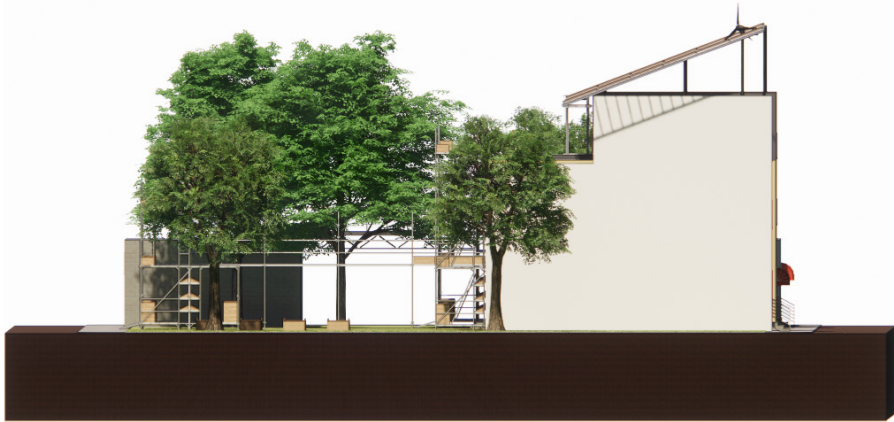


NORTH

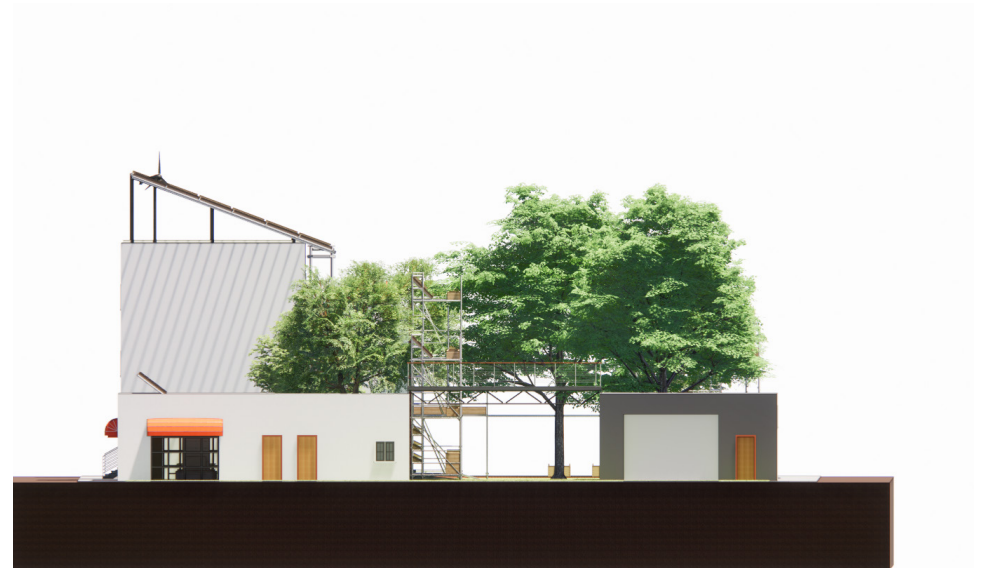


SOUTH

# ELEVATIONS



**EAST**



**WEST**



# SECTIONS



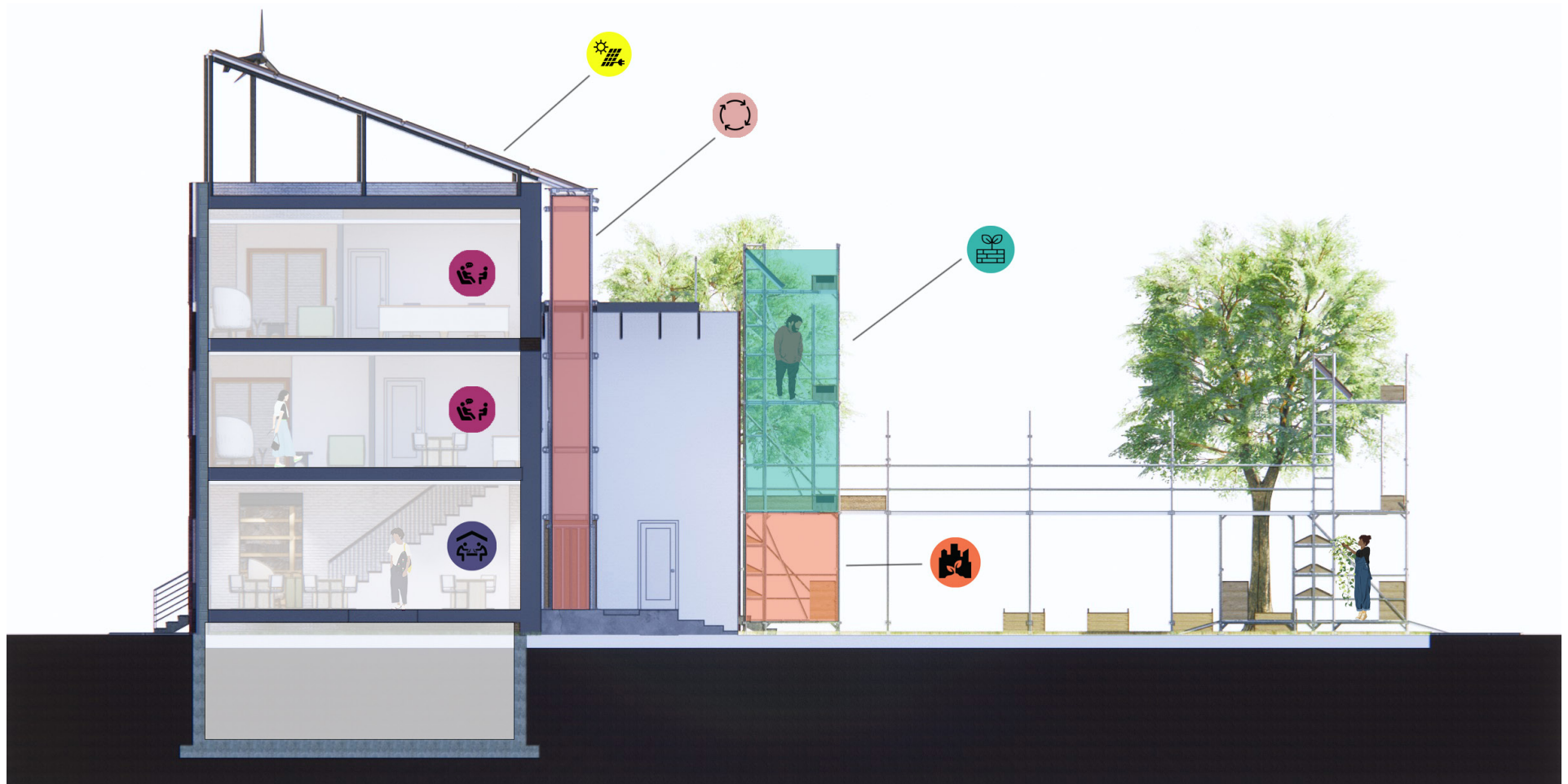
**EDUCATIONAL BUILDING SECTION- WEST FACING**

# SECTIONS



FULL SITE SECTION

# SECTIONS



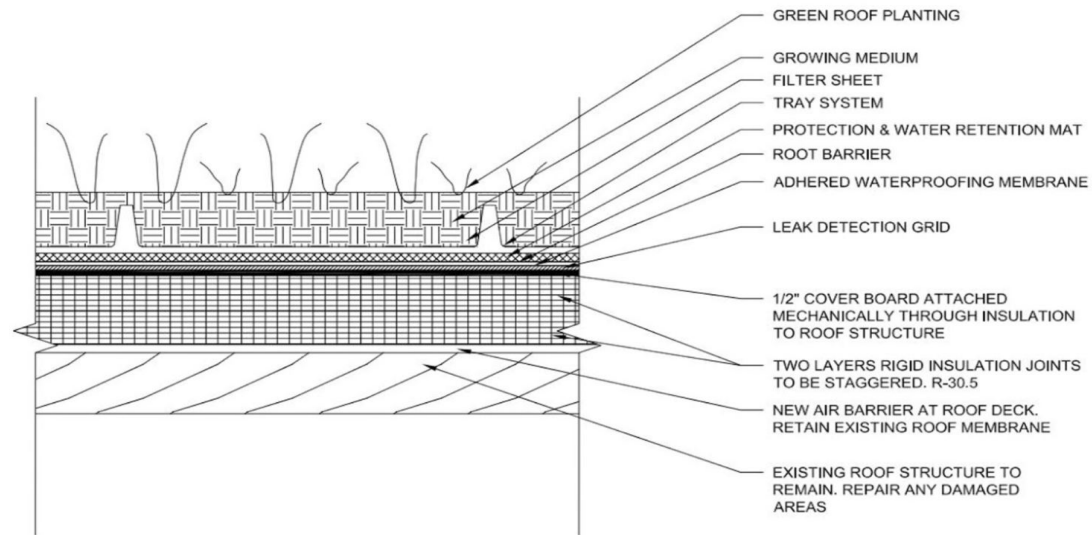


# ROOF DETAIL

## NORTH PHILADELPHIA PEACE PARK

2226 W. JEFFERSON STREET

THOMAS JEFFERSON UNIVERSITY : RETAIL DIVISION



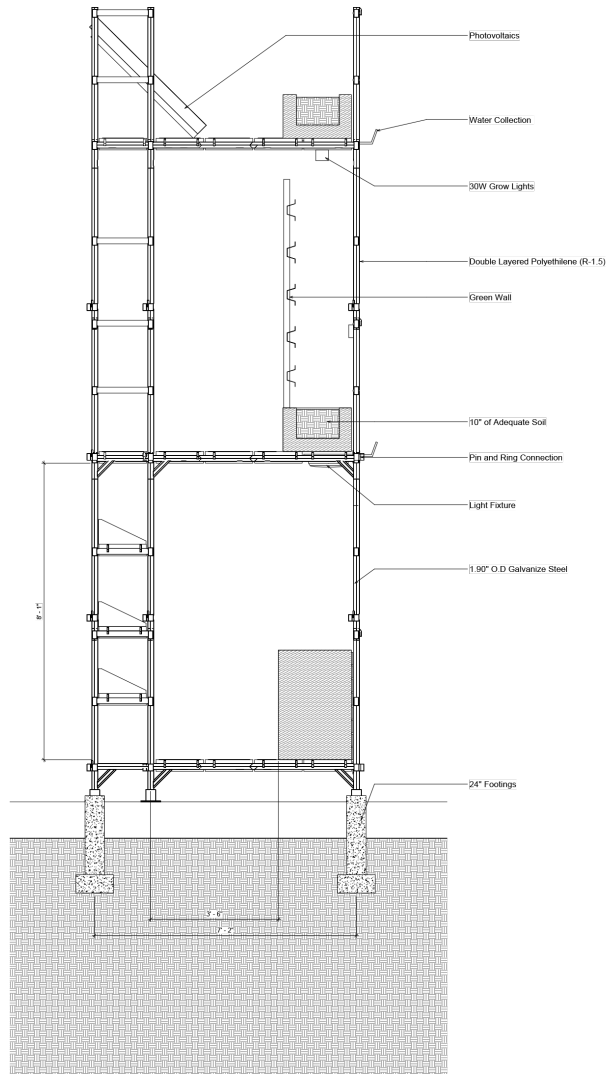
ROOF DETAIL

# SCAFFOLDING DETAILS

## NORTH PHILADELPHIA PEACE PARK

2226 W. JEFFERSON STREET

THOMAS JEFFERSON UNIVERSITY : RETAIL DIVISION



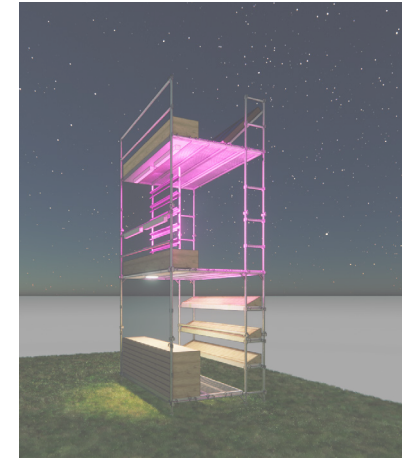
SCAFFOLDING DETAIL



PHASE 1



PHASE 2



PHASE 3

# EXTERIOR RENDERINGS



**EXTERIOR BEHIND THE BUFFER ZONE**

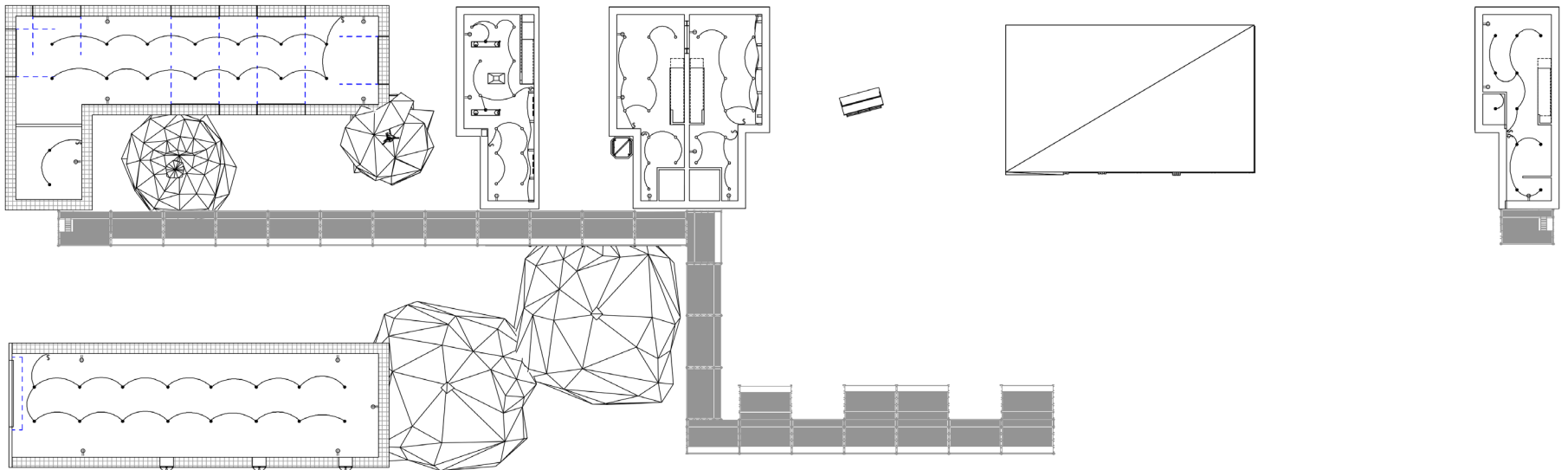


# MECHANICAL PLANS

## NORTH PHILADELPHIA PEACE PARK

2226 W. JEFFERSON STREET

THOMAS JEFFERSON UNIVERSITY : RETAIL DIVISION



## LIGHTING PLAN

# LIGHTING SPECIFICATIONS

## NORTH PHILADELPHIA PEACE PARK

2226 W. JEFFERSON STREET

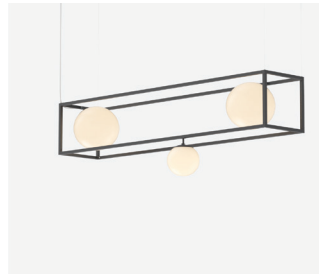
THOMAS JEFFERSON UNIVERSITY : RETAIL DIVISION



### SHATTER RESISTANT LIGHT BULB

**Product Type** - Recessed Downlight

**Manufacturer** - BOUNDARY



### DECORATIVE LIGHT FIXTURE

**Product Type** - Pendant Fixture

**Manufacturer** - Rich Brilliant Willing

**PRODUCT NAME** LED Emergency Light Bulb (3-Pack)

**PRODUCT #** 100113303w

**FINISH** Automatic On/Off Sensor, Damp-Rated, Shatter Proof, Shatter Resistant

**PERFORMANCE** E26 Base, 800 Lumens, 3200 K, 60 Watts, Warm White Color Temperature

**PRODUCT WEBSITE LINK** <https://www.homedepot.com/p/BOUNDARY-LED-Emergency-Light-Bulb-3-Pack-100113303w/314216417>

**PRODUCT NAME** Lonney Grey Stone Residential Vinyl Sheet Flooring

**PRODUCT #** RGW-3-PC30-30-120\_TM\_DEX

**FINISH** Matte Black Steel frame with satin opal globes

**PERFORMANCE** 3000K (soft white), 110-120V Input TRIAC / ELV / 0-10V, 1% Dimming, Power Consumption 25.5W, Luminaire Watts 25.5W, 90 CRI, UL Listed, Suitable for Damp Locations

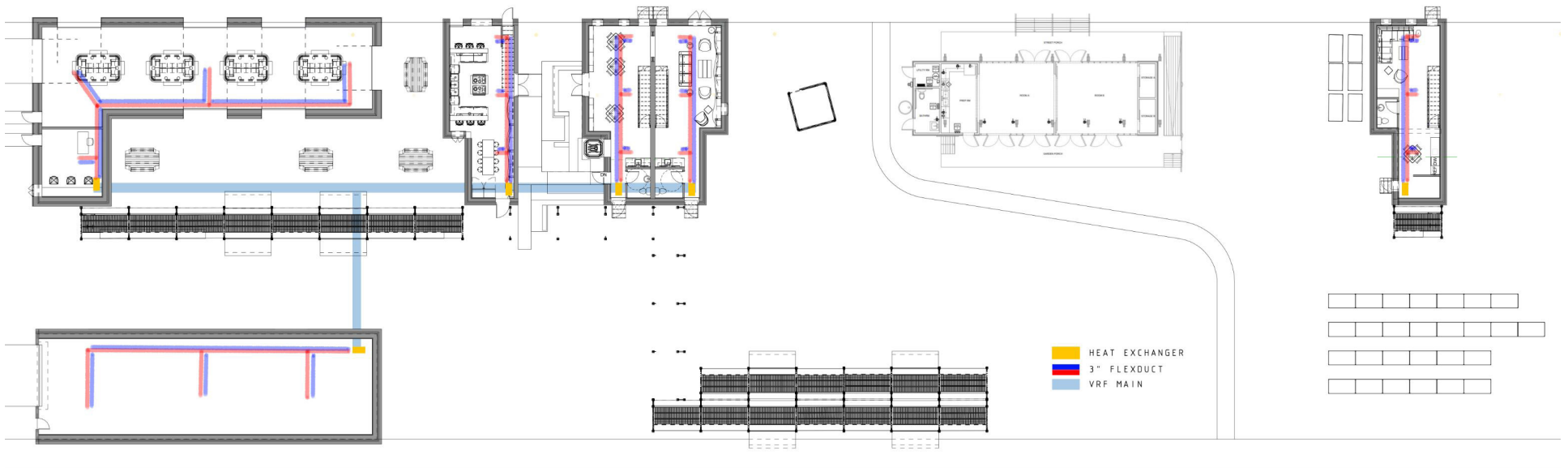
**PRODUCT WEBSITE LINK** [https://rbw.com/products/witt-3/pc30-30-120\\_tm\\_dex](https://rbw.com/products/witt-3/pc30-30-120_tm_dex)

# MECHANICAL PLANS

## NORTH PHILADELPHIA PEACE PARK

2226 W. JEFFERSON STREET

THOMAS JEFFERSON UNIVERSITY : RETAIL DIVISION



### HVAC PLAN

#### SYSTEM COOLING SETPOINTS

MAIN SETPOINT = 23.9 'C

SETBACK- 26.7 'C

#### SYSTEM HEATING SETPOINTS

MAIN SETPOINT = 20.6 'C

SETBACK- 15.6 'C

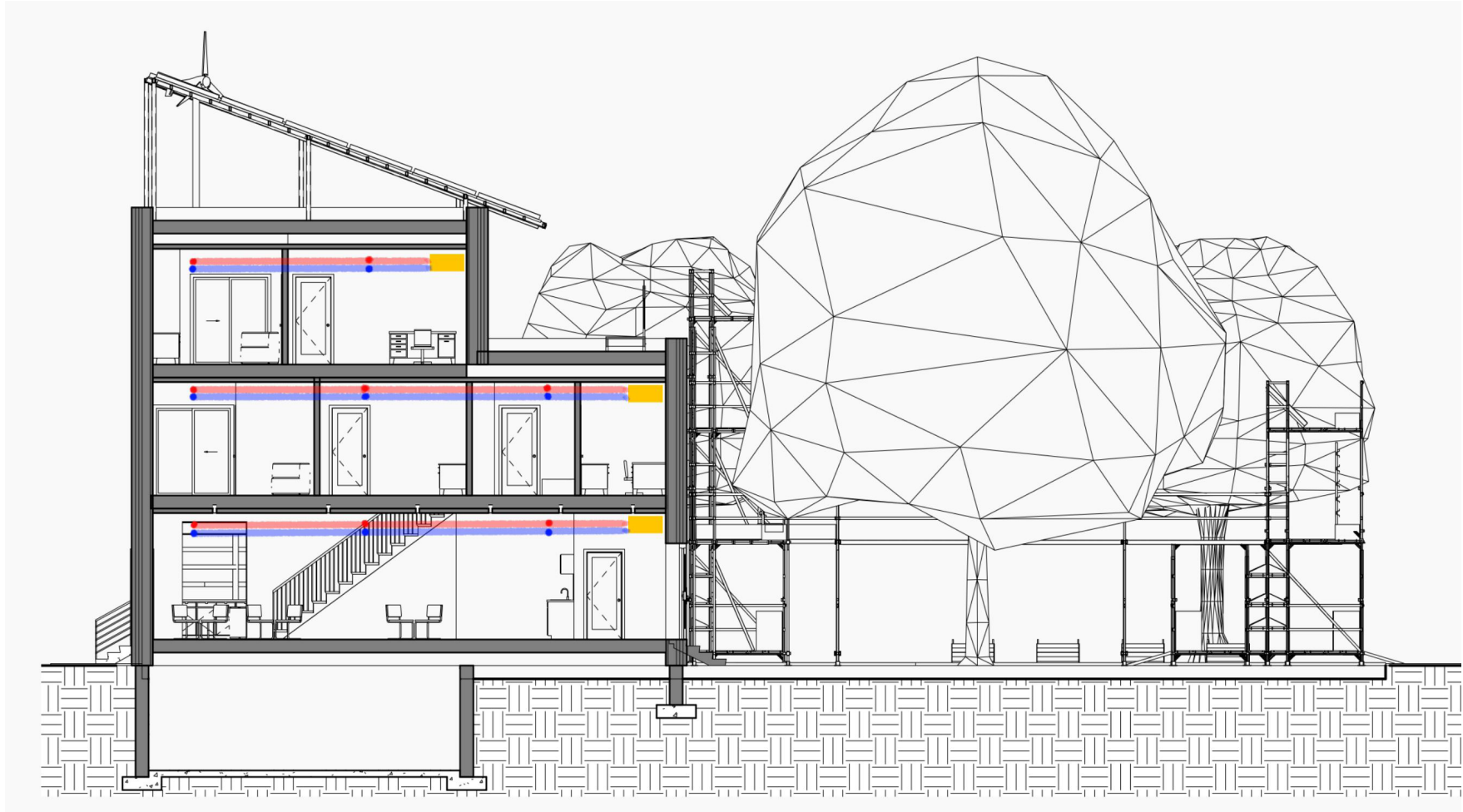


# MECHANICAL SECTIONS

## NORTH PHILADELPHIA PEACE PARK

2226 W. JEFFERSON STREET

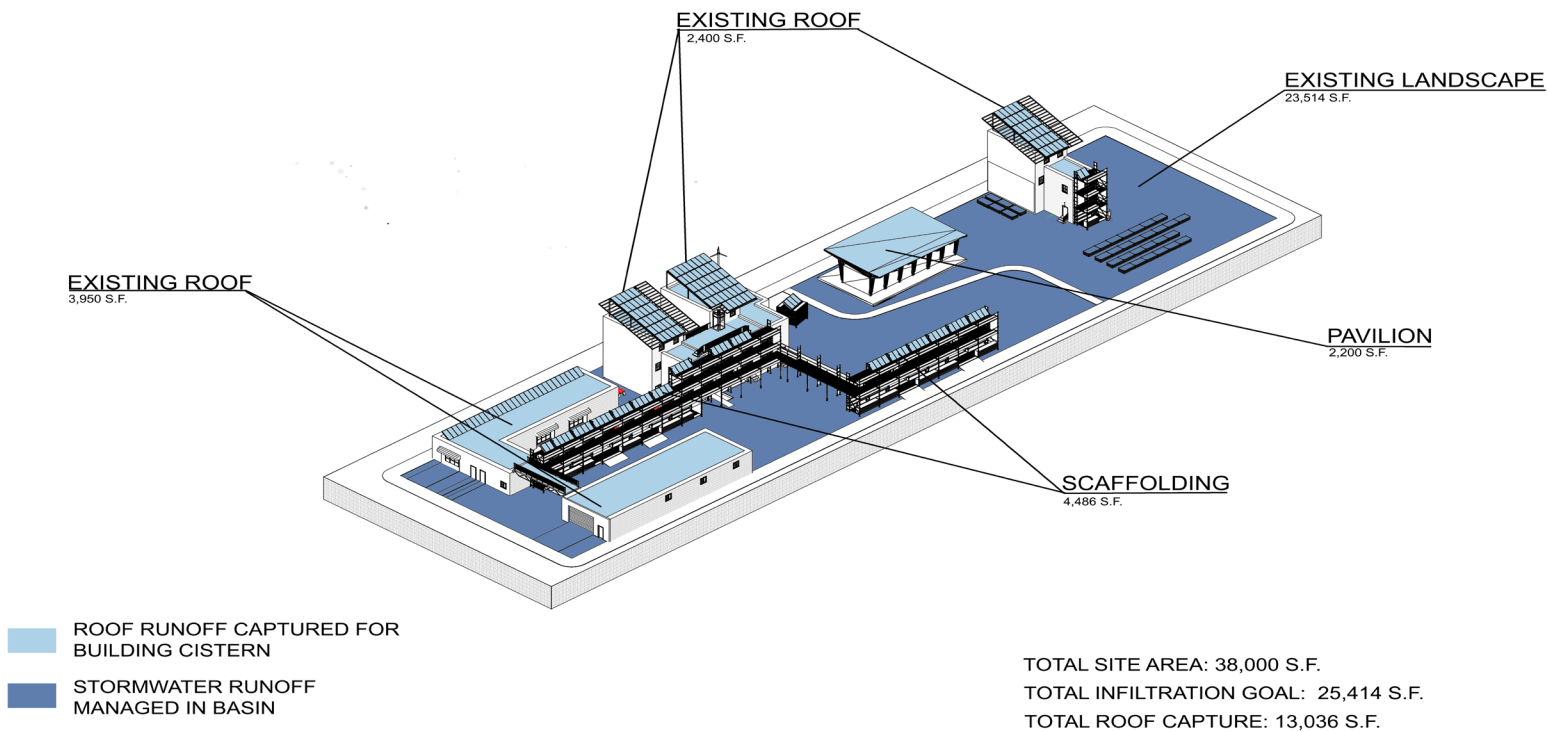
THOMAS JEFFERSON UNIVERSITY : RETAIL DIVISION



HVAC SECTION

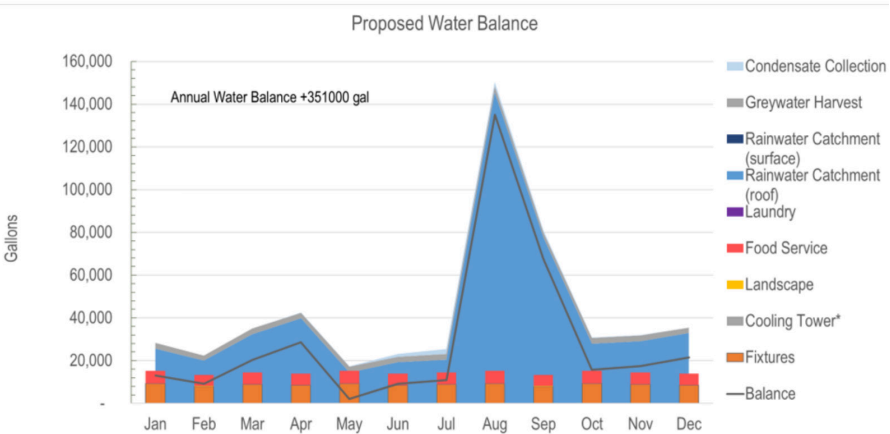
# WATER DIAGRAM

**NORTH PHILADELPHIA PEACE PARK**  
2226 W. JEFFERSON STREET  
THOMAS JEFFERSON UNIVERSITY : RETAIL DIVISION

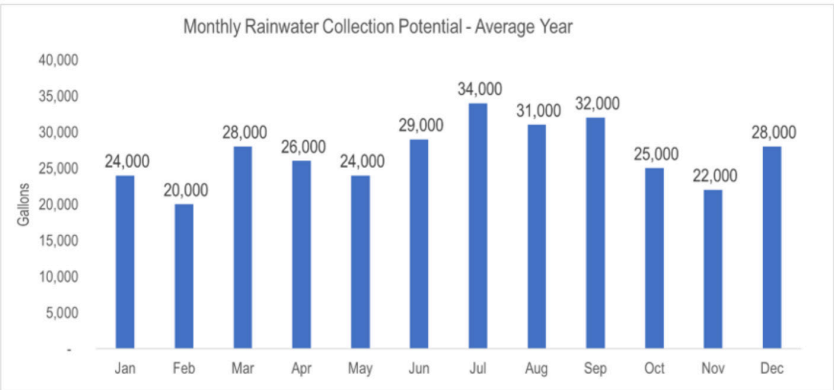


# WATER DETAILS

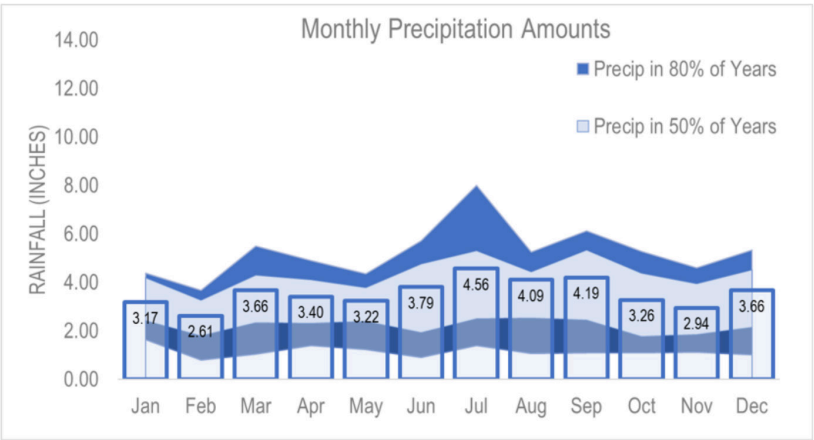
## Annual Water Balance – Pease Park Wet Year



## Monthly Rainwater Collection Potential – Average Year

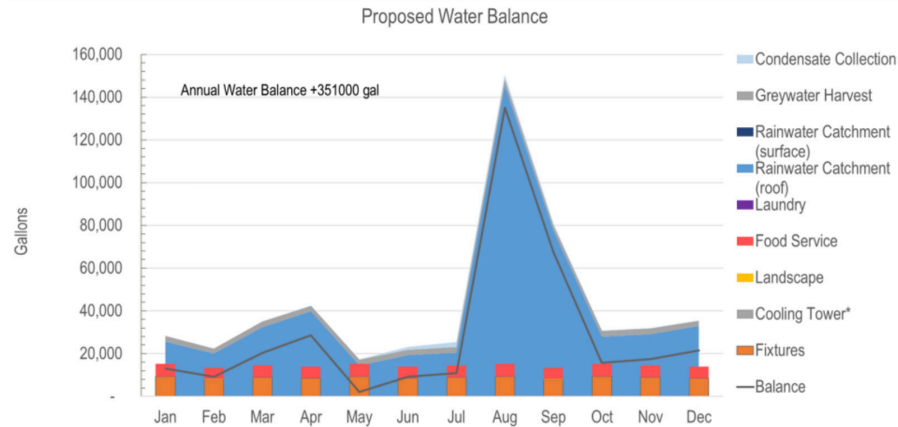


## 30 Year Annual Rainwater

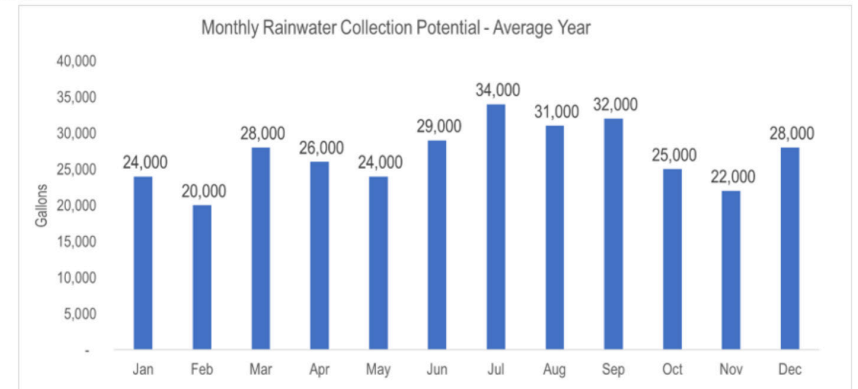


# WATER DETAILS

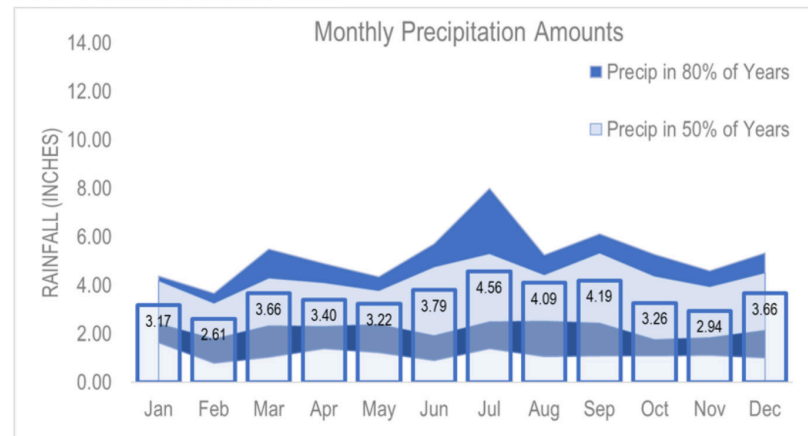
## Annual Water Balance – Pease Park Wet Year



## Monthly Rainwater Collection Potential – Average Year



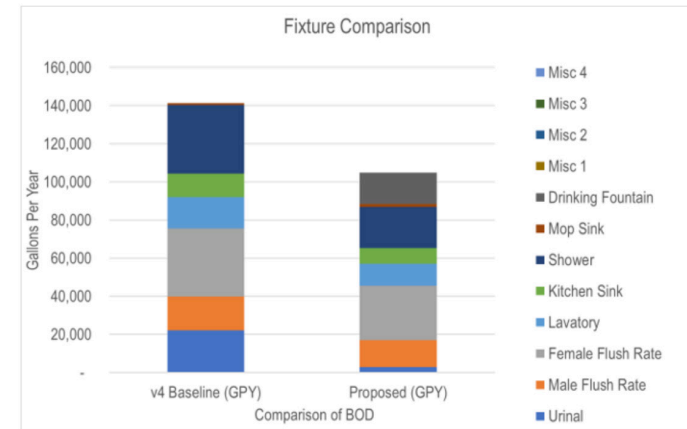
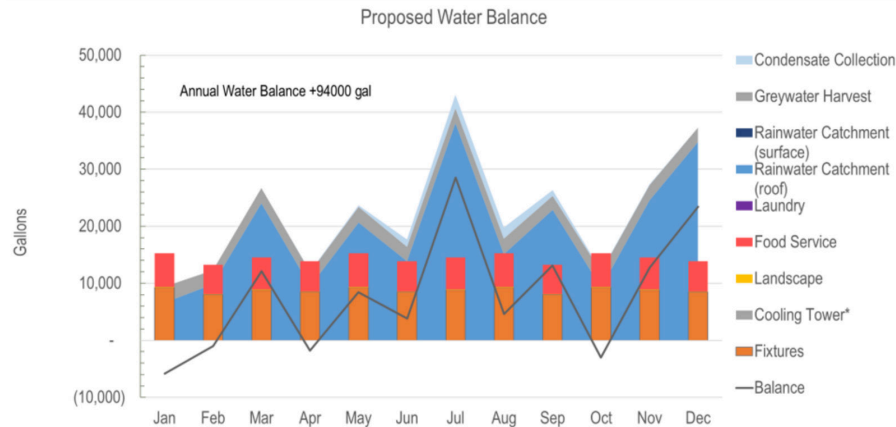
## 30 Year Annual Rainwater



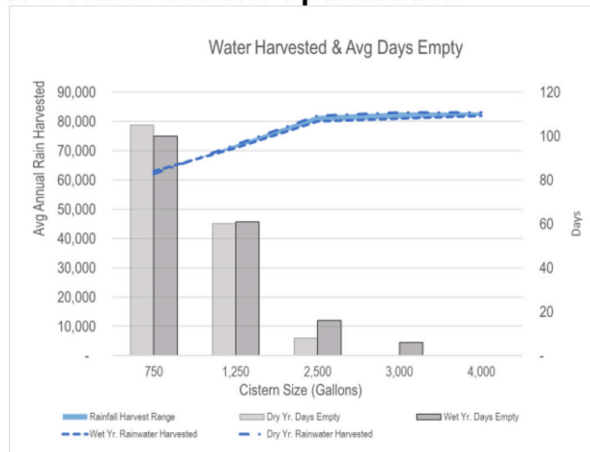


# WATER DETAILS

## Annual Water Balance – Pease Park Dry Year



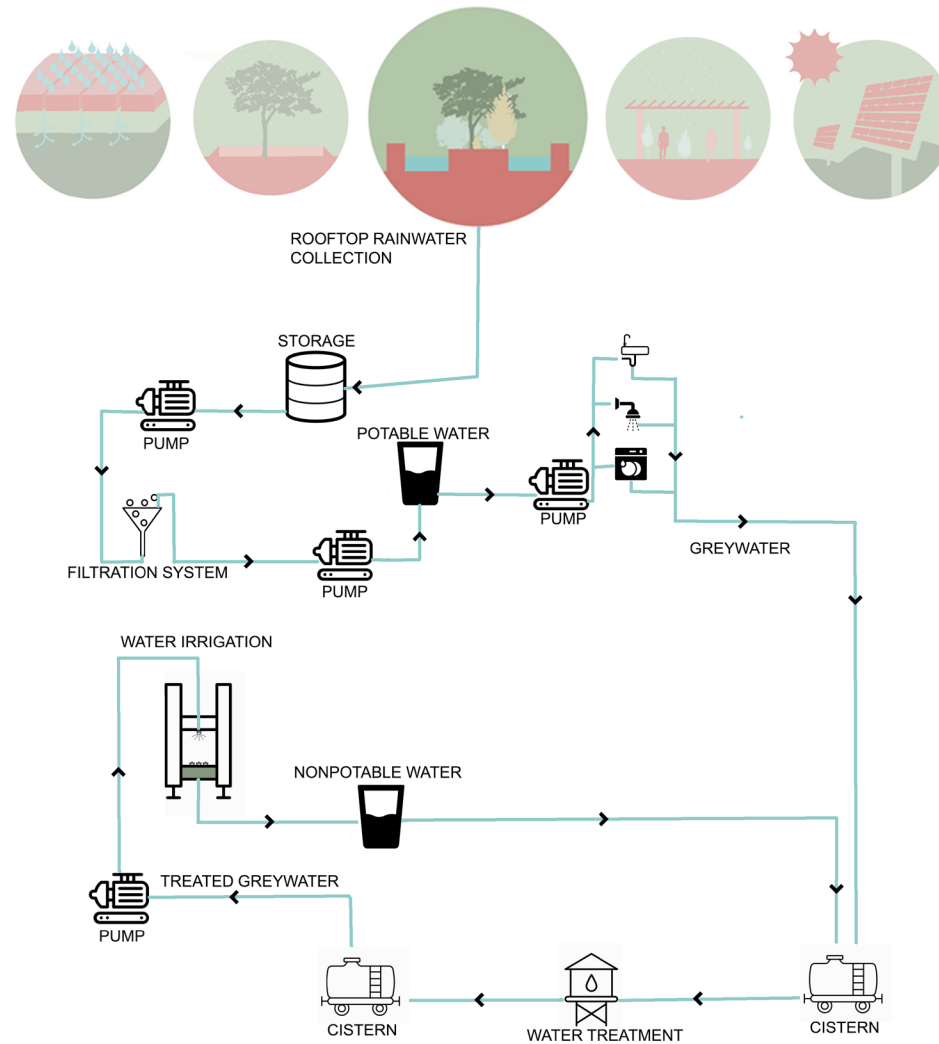
## Rainwater to Potable Cistern Optimization



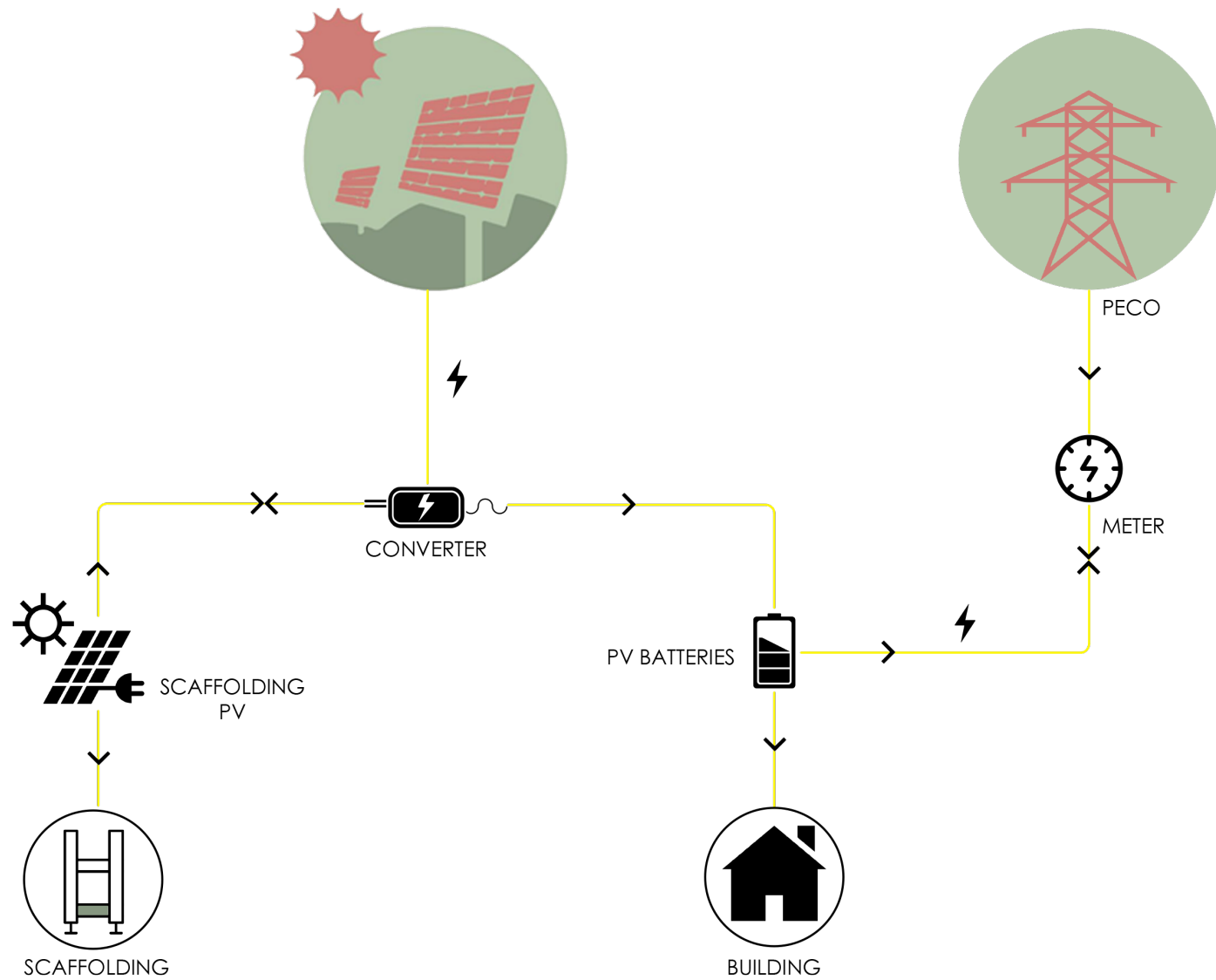
85 FTEs  
13,036 sqft roof capture area @ 80% Efficient  
900 sqft cafe

| Water Closets and Urinals | Value | Select Unit Measure |
|---------------------------|-------|---------------------|
| Urinal                    | 0.125 | GPF                 |
| Male Flush Rate           | 1.28  | GPF                 |
| Female Flush Rate         | 1.28  | GPF                 |
| Lavatory                  | 0.35  | GPM                 |
| Kitchen Sink              | 1.5   | GPM                 |
| Shower                    | 1.5   | GPM                 |
| Mop Sink                  | 3     | GPM                 |
| Drinking Fountain         | 1     | GPM                 |

# WATER DIAGRAM

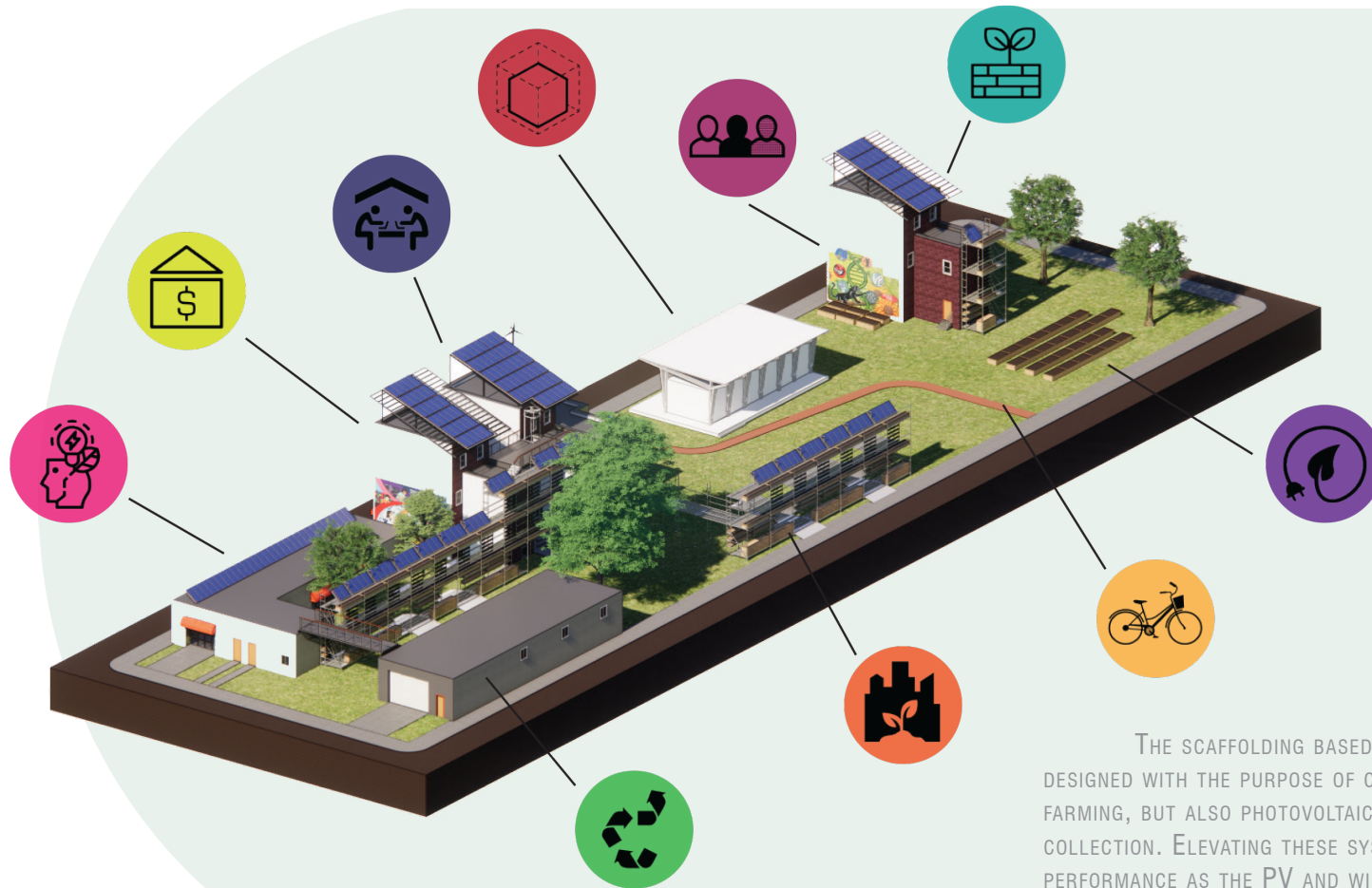


# ENERGY DIAGRAM



# INTEGRATED PERFORMANCE

## NORTH PHILADELPHIA PEACE PARK

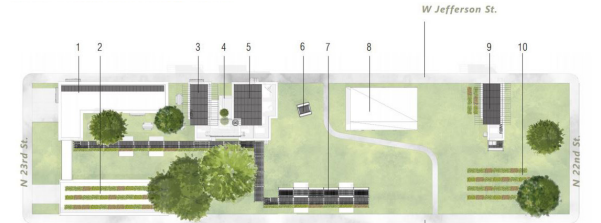


THE SCAFFOLDING BASED SPACE FRAME STRUCTURE IS DESIGNED WITH THE PURPOSE OF CREATING SPACE FOR NOT ONLY FARMING, BUT ALSO PHOTOVOLTAICS, WIND TURBINES AND WATER COLLECTION. ELEVATING THESE SYSTEMS WILL MAXIMIZE THEIR PERFORMANCE AS THE PV AND WIND TURBINES WILL GET MORE EXPOSURE TO SUN AND WIND, AS RAINWATER GETS COLLECTED FROM THE ROOFTOPS AND STORED IN A ROOFTOP CISTERN.



# COST ESTIMATE BY BUILDING

## NORTH PHILADELPHIA PEACE PARK



SITE PLAN

- 1-RETAIL BUILDING
- 2-EXISTING MECHANIC SHOP
- 3-COMMUNITY KITCHEN BUILDING
- 4-OUTDOOR PATIO "sunny zone"
- 5-EDUCATIONAL BUILDING
- 6-CUBE VERTICAL GARDEN
- 7-SCAFFOLDING VERTICAL GARDEN
- 8-PAVILION
- 9-ARTS BUILDING
- 10-RAISED BED GARDEN

| Estimate Name: Garage                             |  |  |  | Estimate Name: Mixed use-office                   |  |  |  | Estimate Name: Produce Market                     |  |  |  |
|---|--|--|--|---|--|--|--|---|--|--|--|
| Building Type: Restaurant with Brick / Wood Frame |  |  |  | Building Type: Restaurant with Brick / Wood Frame |  |  |  | Building Type: Restaurant with Brick / Wood Frame |  |  |  |
| Location: PHILADELPHIA, PA                        |  |  |  | Location: PHILADELPHIA, PA                        |  |  |  | Location: PHILADELPHIA, PA                        |  |  |  |
| Story Count: 2                                    |  |  |  | Story Count: 3                                    |  |  |  | Story Count: 2                                    |  |  |  |
| Story Height (L.F.): 10                           |  |  |  | Story Height (L.F.): 12.00                        |  |  |  | Story Height (L.F.): 12.00                        |  |  |  |
| Floor Area (S.F.): 1950                           |  |  |  | Floor Area (S.F.): 1130                           |  |  |  | Floor Area (S.F.): 1886                           |  |  |  |
| Labor Type: STD                                   |  |  |  | Labor Type: STD                                   |  |  |  | Labor Type: STD                                   |  |  |  |
| Basement Included: Yes                            |  |  |  | Basement Included: Yes                            |  |  |  | Basement Included: Yes                            |  |  |  |
| Data Release: Year 2021                           |  |  |  | Data Release: Year 2021                           |  |  |  | Data Release: Year 2021                           |  |  |  |
| Cost Per Square Foot: \$43.41                     |  |  |  | Cost Per Square Foot: \$25.30                     |  |  |  | Cost Per Square Foot: \$41.99                     |  |  |  |
| Building Cost: \$84,413.95                        |  |  |  | Building Cost: \$28,715.34                        |  |  |  | Building Cost: \$64,252.11                        |  |  |  |

| Quantity   |  |  |  | % of Total  |  |  |  | Cost Per S.F. |  |  |  | Cost        |  |  |  |
|--|--|--|--|---|--|--|--|---------------|--|--|--|-------------|--|--|--|
| B1020  |  |  |  | Roof Construction   |  |  |  | \$8.00        |  |  |  | \$15,600.00 |  |  |  |
| B1020  |  |  |  | Exterior Windows  |  |  |  | \$7.00        |  |  |  | \$13,600.00 |  |  |  |
| B10106100050   |  |  |  | Gutters, box, aluminum, .027" thick, 5", enameled finish  |  |  |  | \$1.22        |  |  |  | \$2,300.00  |  |  |  |
| B10106200100   |  |  |  | Downspout, aluminum, rectangular, 2" x 3", enameled mill finish, .020" thick  |  |  |  | \$0.27        |  |  |  | \$413.10    |  |  |  |
| C  |  |  |  | Interiors   |  |  |  | \$37.94       |  |  |  | \$3,900.00  |  |  |  |
| C1010  |  |  |  | Partitions  |  |  |  | \$1.00        |  |  |  | \$1,950.00  |  |  |  |
| C10101280700   |  |  |  | Gypsum board, 1 face only, exterior sheathing, fire resistant, 5/8"   |  |  |  | \$1.00        |  |  |  | \$1,950.00  |  |  |  |
| C10101280900   |  |  |  | Add for the following: taping and finishing   |  |  |  | \$1.00        |  |  |  | \$1,950.00  |  |  |  |
| D  |  |  |  | Services  |  |  |  | \$119.97      |  |  |  | \$119.97    |  |  |  |
| D4010  |  |  |  | Sprinklers  |  |  |  | \$11.77       |  |  |  | \$7,546.50  |  |  |  |
| D40104100580   |  |  |  | Wet pipe sprinkler systems, steel, light hazard, 1 floor, 2000 SF   |  |  |  | \$11.77       |  |  |  | \$7,546.50  |  |  |  |
| D40104101020   |  |  |  | Wet pipe sprinkler systems, steel, ordinary hazard, 1 floor, 1000 SF  |  |  |  | \$1.87        |  |  |  | \$1,867.40  |  |  |  |
| D50309100460   |  |  |  | Fire alarm command center, addressable without voice, excl. wire & conduit  |  |  |  | \$0.84        |  |  |  | \$6,825.00  |  |  |  |
| D5030  |  |  |  | Communications and Security   |  |  |  | \$2.00        |  |  |  | \$3,900.00  |  |  |  |
| D50309100450   |  |  |  | Communication and alarm systems, fire detection, addressable, 12 detectors, includes outlets, boxes, conduit and wire |  |  |  | \$1.50        |  |  |  | \$2,995.00  |  |  |  |
| SubTotal   |  |  |  | 100%  |  |  |  | \$456.74      |  |  |  | \$50,313.00 |  |  |  |
| Contractor Fees (General Conditions,Overhead,Profit) |  |  |  | 25.0 %  |  |  |  | \$114.19      |  |  |  | \$12,578.40 |  |  |  |
| Architectural Fees                                   |  |  |  | 7.0 %   |  |  |  | \$39.96       |  |  |  | \$5,521.95  |  |  |  |
| User Fees  |  |  |  | 0.0 %   |  |  |  | \$0.00        |  |  |  | \$0.00      |  |  |  |
| Total Building Cost                                  |  |  |  | 0.0 %   |  |  |  | \$0.00        |  |  |  | \$64,413.95 |  |  |  |

| Estimate Name: Co-Working Library                 |  |  |  | Estimate Name: Community Kitchen Building         |  |  |  | Estimate Name: Arts Building                      |  |  |  |
|---|--|--|--|---|--|--|--|---|--|--|--|
| Building Type: Restaurant with Brick / Wood Frame |  |  |  | Building Type: Restaurant with Brick / Wood Frame |  |  |  | Building Type: Restaurant with Brick / Wood Frame |  |  |  |
| Location: PHILADELPHIA, PA                        |  |  |  | Location: PHILADELPHIA, PA                        |  |  |  | Location: PHILADELPHIA, PA                        |  |  |  |
| Story Count: 2                                    |  |  |  | Story Count: 3                                    |  |  |  | Story Count: 3                                    |  |  |  |
| Story Height (L.F.): 12.00                        |  |  |  | Story Height (L.F.): 12.00                        |  |  |  | Story Height (L.F.): 12.00                        |  |  |  |
| Floor Area (S.F.): 1130                           |  |  |  | Floor Area (S.F.): 1530                           |  |  |  | Floor Area (S.F.): 1530                           |  |  |  |
| Labor Type: STD                                   |  |  |  | Labor Type: STD                                   |  |  |  | Labor Type: STD                                   |  |  |  |
| Basement Included: Yes                            |  |  |  | Basement Included: Yes                            |  |  |  | Basement Included: Yes                            |  |  |  |
| Data Release: Year 2021                           |  |  |  | Data Release: Year 2021                           |  |  |  | Data Release: Year 2021                           |  |  |  |
| Cost Per Square Foot: \$25.30                     |  |  |  | Cost Per Square Foot: \$34.14                     |  |  |  | Cost Per Square Foot: \$52,227.91                 |  |  |  |
| Building Cost: \$28,715.34                        |  |  |  | Building Cost: \$52,227.91                        |  |  |  | Building Cost: \$52,227.91                        |  |  |  |

| Quantity   |  |  |  | % of Total  |  |  |  | Cost Per S.F. |  |  |  | Cost        |  |  |  |
|--|--|--|--|---|--|--|--|---------------|--|--|--|-------------|--|--|--|
| B1020  |  |  |  | Roof Construction   |  |  |  | \$8.00        |  |  |  | \$12,480.00 |  |  |  |
| B1020  |  |  |  | Exterior Windows  |  |  |  | \$7.00        |  |  |  | \$10,710.00 |  |  |  |
| B10106100050   |  |  |  | Gutters, box, aluminum, .027" thick, 5", enameled finish  |  |  |  | \$1.22        |  |  |  | \$1,867.40  |  |  |  |
| B10106200100   |  |  |  | Downspout, aluminum, rectangular, 2" x 3", enameled mill finish, .020" thick  |  |  |  | \$0.27        |  |  |  | \$413.10    |  |  |  |
| C  |  |  |  | Interiors   |  |  |  | \$37.94       |  |  |  | \$3,900.00  |  |  |  |
| C1010  |  |  |  | Partitions  |  |  |  | \$1.00        |  |  |  | \$1,530.00  |  |  |  |
| C10101280700   |  |  |  | Gypsum board, 1 face only, exterior sheathing, fire resistant, 5/8"   |  |  |  | \$1.00        |  |  |  | \$1,530.00  |  |  |  |
| C10101280900   |  |  |  | Add for the following: taping and finishing   |  |  |  | \$1.00        |  |  |  | \$1,530.00  |  |  |  |
| D  |  |  |  | Services  |  |  |  | \$119.97      |  |  |  | \$119.97    |  |  |  |
| D4010  |  |  |  | Sprinklers  |  |  |  | \$11.77       |  |  |  | \$7,546.50  |  |  |  |
| D40104100580   |  |  |  | Wet pipe sprinkler systems, steel, light hazard, 1 floor, 2000 SF   |  |  |  | \$11.77       |  |  |  | \$7,546.50  |  |  |  |
| D40104101020   |  |  |  | Wet pipe sprinkler systems, steel, ordinary hazard, 1 floor, 1000 SF  |  |  |  | \$1.87        |  |  |  | \$1,867.40  |  |  |  |
| D50309100460   |  |  |  | Fire alarm command center, addressable without voice, excl. wire & conduit  |  |  |  | \$0.84        |  |  |  | \$6,825.00  |  |  |  |
| D5030  |  |  |  | Communications and Security   |  |  |  | \$2.00        |  |  |  | \$3,900.00  |  |  |  |
| D50309100450   |  |  |  | Communication and alarm systems, fire detection, addressable, 12 detectors, includes outlets, boxes, conduit and wire |  |  |  | \$1.50        |  |  |  | \$2,995.00  |  |  |  |
| SubTotal   |  |  |  | 100%  |  |  |  | \$456.74      |  |  |  | \$50,313.00 |  |  |  |
| Contractor Fees (General Conditions,Overhead,Profit) |  |  |  | 25.0 %  |  |  |  | \$114.19      |  |  |  | \$12,578.40 |  |  |  |
| Architectural Fees                                   |  |  |  | 7.0 %   |  |  |  | \$39.96       |  |  |  | \$5,521.95  |  |  |  |
| User Fees  |  |  |  | 0.0 %   |  |  |  | \$0.00        |  |  |  | \$0.00      |  |  |  |
| Total Building Cost                                  |  |  |  | 0.0 %   |  |  |  | \$0.00        |  |  |  | \$64,413.95 |  |  |  |

# MARKET ANALYSIS

## NORTH PHILADELPHIA PEACE PARK

2226 W. JEFFERSON STREET

THOMAS JEFFERSON UNIVERSITY : RETAIL DIVISION

### North Philly Peace Park

Data Release : Year 2021

### Scaffolding Estimate Unit Cost

| LineNumber   | Line Source | Quantity | Description   | Unit | Material | Total    | O&P | Mat.  | O&P      |           | Labor Type | Data Release | CCI Location                          |
|--------------|-------------|----------|---|------|----------|----------|-----|-------|----------|-----------|------------|--------------|---------------------------------------|
| 015423701200 |             | 1        | Scaffolding, steel tubular, regular, frame, buy, 6'-4" high x 5' wide           | Ea.  | \$ 83.25 | \$ 83.25 | \$  | 91.72 | \$ 91.72 | \$ 91.72  | STD        | Year 2021    | PENNSYLVANIA / PHILADELPHIA (190-191) |
| 015423701500 |             |          | Scaffolding, steel tubular, regular, accessory, cross brace, buy                | Ea.  | \$ 19.14 | \$ 19.14 | \$  | 20.94 | \$ 20.94 | \$ -      | STD        | Year 2021    | PENNSYLVANIA / PHILADELPHIA (190-191) |
| 015423701550 |             | 3        | Scaffolding, steel tubular, regular, accessory, guardrail post, buy             | Ea.  | \$ 23.93 | \$ 23.93 | \$  | 26.42 | \$ 26.42 | \$ 79.26  | STD        | Year 2021    | PENNSYLVANIA / PHILADELPHIA (190-191) |
| 015423701600 |             | 1        | Scaffolding, steel tubular, regular, accessory, guardrail section, buy, 7' long | Ea.  | \$ 8.13  | \$ 8.13  | \$  | 8.97  | \$ 8.97  | \$ 8.97   | STD        | Year 2021    | PENNSYLVANIA / PHILADELPHIA (190-191) |
| 015423701650 |             | 4        | Scaffolding, steel tubular, regular, accessory, screw jack & plate, buy         | Ea.  | \$ 25.92 | \$ 25.92 | \$  | 28.41 | \$ 28.41 | \$ 113.64 | STD        | Year 2021    | PENNSYLVANIA / PHILADELPHIA (190-191) |
| 015423701700 |             | 3        | Scaffolding, steel tubular, regular, accessory, sidearm bracket, buy            | Ea.  | \$ 25.92 | \$ 25.92 | \$  | 28.91 | \$ 28.91 | \$ 86.73  | STD        | Year 2021    | PENNSYLVANIA / PHILADELPHIA (190-191) |
| 015423701750 |             | 4        | Scaffolding, steel tubular, regular, accessory, caster, buy, 8" diam            | Ea.  | \$ 37.39 | \$ 37.39 | \$  | 40.88 | \$ 40.88 | \$ 163.52 | STD        | Year 2021    | PENNSYLVANIA / PHILADELPHIA (190-191) |
| 015423701800 |             | 6        | Scaffolding, steel tubular, regular, accessory, plank, buy, 2" x 10" x 16' long | Ea.  | \$ 66.30 | \$ 66.30 | \$  | 73.28 | \$ 73.28 | \$ 439.68 | STD        | Year 2021    | PENNSYLVANIA / PHILADELPHIA (190-191) |
|              |             |          |   |      |          |          |     |       |          | \$ 289.98 | \$ 319.53  | \$ 983.52    |                                       |



# EXTERIOR RENDERINGS



**EXTERIOR IN FRONT OF PAVILLION**



# EXTERIOR RENDERINGS



**BUFFER ZONE**



# EXTERIOR RENDERINGS



**EXTERIOR BEHIND THE BUFFER ZONE**